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STEWARDSHIP AS A TRANSFORMATIVE PRACTICE: AN INQUIRY INTO THE NATURE OF SUSTAINED INVOLVEMENT AND ONGOING LEARNING OF ENVIRONMENTAL STEWARDS

A Dissertation Presented

by

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ABSTRACT

STEWARDSHIP AS A TRANSFORMATIVE PRACTICE:
AN INQUIRY INTO THE NATURE OF SUSTAINED INVOLVEMENT AND
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Stewardship, a trust that we have been given to pass our Earth on to future generations so that they may benefit from its wealth as we have, is a powerful concept. The more that people can begin to understand it and harness it in order to set a course for action, the greater will be our cause for hope, and perhaps even optimism, about the future of the Earth and the lives our children will enjoy.

Increasingly over the past fifteen years or so, a number of small, community-based environmental groups have embraced stewardship as a core component of their mission. While their approaches to advocacy and action are diverse, and while the foci of their work may vary, these groups hold in common a deep sense of responsibility to preserve and protect the natural resources of their home place.

People engaged in the work of these groups, whether as volunteers, paid staff, or affiliates, come from a range of educational and professional backgrounds, as well as life experience. As a result, there may be a number of different reasons why they initially got involved, why they remain involved over a period of several years, and how they address any personal learning needs that

arise from their involvement. Nevertheless, patterns may be discerned for all of these dynamics, across educational and professional backgrounds, as well as within and across different groups.

Further, there is a potential for meaning perspective transformation from engagement in community-based environmental stewardship. This takes many forms, with the end result a significant change in one's worldview.

Through a review of primary source literature produced by each of the three groups included in the study, a series of short, structured interviews with thirty participants (ten from each group), and a series of nine longer, unstructured second interviews with nine of the original thirty (three from each group), data was collected for the study.

Data was analyzed first by creating profiles of the three community-based environmental stewardship groups, using the primary source literature and interview responses. Categories within the four dynamics of personal involvement (patterns of initial involvement, patterns of sustained involvement, patterns of ongoing learning, and patterns of transformation) as well as organizational dynamics (patterns of community building, group dynamics) were discerned from the data and analyzed.

The results of the analysis offer a number of suggestions for stewardship educators working with community based environmental groups. However, it should be noted that findings from this research are not generalizable – the study was qualitative, and participants were not randomly selected. A number of suggestions for further research are therefore offered.

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INTRODUCTION

Overview

There is a photo, contained in *Stewardship*, a 1966 publication of the Open Space Action Committee, which speaks volumes about where we were as a nation 36 years ago, and about the troubling path that we have inexorably pursued since. The viewer sees what must have been a typical Main Street of a suburban community at the time. A chaotic clash of signage battles for center stage of the photographer's lens – "Zenith Television – Radio", "Pittsburgh Paints", "Shoe-O-Rama", "Syosset Bargain Center" (the only clue that the picture was taken in an upscale suburban Long Island community). Cars parked across the street from the signs alert us that we are in the mid-1960s. The photo is included in the book as a cautionary note – by all means, we must avoid over-development, unabated suburban sprawl, and we must work to save our precious open space.

Yet, in the context of the year 2002 – endless strip malls (in which smaller businesses, such as fast food restaurants, are constructed in a matter of days), a rapid increase in the number of suburban commercial office and industrial parks, a staggering growth in the number of new housing developments in only the past ten years, golf courses, and every other imaginable excuse for reducing open space – the photo in this book is rather charming, evocative, stirring in the viewer feelings of nostalgia for a time when an unwavering faith in modernity and the free market system prevailed.

More disturbingly, it becomes clear that, by and large, the warnings of the Open Space Action Committee about the dangers of suburban sprawl to wildlife habitat and to the carrying capacity[1] of the land went unheeded.

At a Spring, 2000 lecture at Amherst College, Dr. Cornel West, a professor of History at Harvard University, speaking on race relations and the future of our nation, said, "While I am not optimistic, I do have hope." Stewardship – a trust that we have been given to pass our Earth on to future generations so that they may benefit from its wealth as we have, is a powerful concept. The more we as a people can collectively begin to understand and harness this concept in order to set a course for action, the greater will be our cause for hope, and perhaps even optimism, about the future of the Earth and the lives our children will enjoy.

Purpose, General Research Questions, and Conceptual Framework

Purpose.

This dissertation will explore the concept of stewardship, especially as it relates to the process of sustained individual involvement and ongoing learning of community members in locally managing their natural resource base.

One definition, taken from Peter Block's *Stewardship*, is:

> Stewardship is to hold something in trust for another. Historically, stewardship was a means to protect a kingdom while those rightfully in charge were away, or, more often, to govern for the sake of an underage king. The underage king for us is the next generation. We choose service over self-interest most powerfully when we build the capacity of the next generation to govern themselves. (Block, 1993, p. xx)

[1] "We can define it as the level of resource use or waste output that can be sustained indefinitely, without long-term deterioration in the resource base....It has two aspects: the productive carrying capacity – the ability to provide resources such as food or minerals. And the waste carrying capacity – the ability to absorb a certain level of pollution or degradation without significant damage (Harrison, 1993, p. 243)."

While the author gives this definition primarily with an audience of private sector and government institutional actors in mind, two concepts may be appropriately extracted for community groups working towards greater stewardship of environmental resources. These are the ideas of "to hold something in trust for another" and to "build the capacity of the next generation to govern themselves." Clearly, careful management and conservation of local natural resource bases by this generation of concerned community members is a means of holding it in trust for future generations. By setting this example for our children, we are capable of transforming our own lives while teaching them "to govern themselves," so that they too might evolve into stewards upon maturing into adulthood.

One additional definition of stewardship, synthesized from a number of others, may help to further ground the intent of the research in the conceptual basis of stewardship.

> Stewardship is an individual belief in the connectedness of all things in the natural world. Its adherents seek continuously to improve their knowledge and understanding of this connectedness, in order that they may act to affect positive environmental and social change. Stewards are driven to do this by their love of the Earth and their sense of responsibility to preserve its wealth for future generations (DeMoranville, 2000a, p. 6).

Dissertation or Grand Tour Question. Are there common patterns to the process by which individuals become involved and sustain involvement in community-based environmental stewardship initiatives?

This question guided the research for a number of reasons. First, the question's emphasis on common threads offered a framework for developing a

matrix of patterns/processes with the potential to inform curriculum development for stewardship education/adult environmental education. Secondly, the emphasis on sustained involvement not only acted as a criterion for selecting participants in the study (see below), it also increased the likelihood that those included would have engaged in some sort of learning process to improve their effectiveness, revive their enthusiasm, or increase their confidence.

It is important to explore the *initial* reasons why people get involved, and this was therefore included as a sub-question of the research. In the larger literature on social activism, a variety of reasons have been given as to why participants become involved. For example, one study of antinuclear activists revealed the following.

> In terms of their motivations for becoming involved, some individuals became involved because they saw the issues as imperative to the well being of their local community. Others became involved because they saw the issues in more cosmopolitan terms, i.e., affecting the nation or future generations. Some of the individuals had had previous social movement experience and considered themselves liberals. Other participants had no previous experience as activists and tended to vote Republican. Some individuals shared close personal and social networks with fellow activists, while others did not relate to fellow activists at all outside the requirements of their commitment to the organization. Some participants had been recruited into an organization through friends and acquaintances; others had joined on their own initiative (Cable, et al., 1988, cited in Benbow, 1994, pp. 59-60).

However, it is equally important to select samples wherein the subjects have sustained their involvement for a minimum of one year. This is because it is less likely that someone who, for example, got involved for 4-6 months, then dropped out, would have experienced a meaning perspective transformation

through this involvement. Participants in the FOLK Case Study all had been involved for *several* years. More importantly, a minimum of one year of involvement implies a greater wealth of experience from which to draw in order to respond to research questions.

Finally, it is believed that the answer(s) to this question will have direct relevance to policymakers and adult environmental educators seeking to fund and/or design and implement educational programs for community stewards, as well as providing insights on effective forms that these programs might take.

Sub-Questions

a) Patterns/Processes of Initial and Sustained Involvement

How do individuals become involved in community-based environmental stewardship initiatives?

-Is there a critical incident that pushes them towards action?
-Is there a slow evolution in their thinking?

What sustains their involvement?

b) Patterns/Processes of Ongoing Learning

In what specific learning processes do individuals engage in order to improve their effectiveness and contribute to their praxis as stewards?

Are the greatest resources available through formal, non-formal, or informal channels?

What form(s) do learning opportunities and activities take?

c) Patterns/Processes and Dynamics of Meaning Perspective Transformation

Has their involvement as stewards transformed their lives? If so, how? What are the forms that transformation can take?

d) Other patterns/processes and dynamics

Has the work of the group with which they are involved had an impact on the sense of community among the group's constituents? If so, how?

What are the patterns of group dynamics at work in community-based environmental stewardship groups?

Conceptual Framework. The conceptual framework for this study may be elaborated by first returning to the study's grand tour question: "Are there common patterns to the process by which individuals become involved and sustain involvement in community-based environmental stewardship initiatives?". The study has sought to arrive at an understanding of motivation for initial and sustained involvement of individuals in community-based environmental stewardship efforts.

Secondly, it sheds light on the processes of ongoing learning in which community stewards engage in order to increase their effectiveness and understanding.

Third, it explores the nature of meaning perspective transformation among individuals, if and when it occurs, as a dynamic in the stewardship process.

Finally, the research process allowed additional thematic categories, based on participant responses to other sub-questions of the study (such as understanding of community, group dynamics), to emerge and crystallize, all of which have been included the final matrix of patterns/processes and dynamics of stewardship.

These are the main ideas explored; they form the conceptual framework from which the data analysis sought to discern patterns.

> A conceptual framework explains, either graphically or in narrative form, the main dimensions to be studied – the key factors, or variables – and the presumed relationships among them. Frameworks come in several shapes and sizes. They can be

> rudimentary or elaborate, theory-driven or commonsensical, descriptive or causal (Miles and Huberman, 1984, p. 28).

Supporting literature for data obtained from this study comes from the literature on stewardship, civil society, social capital, and adult learning theory.

Significance of the Study

Findings from this research have the potential to inform curriculum development for stewardship education programs. These programs are a way of encouraging ever increasing numbers of concerned citizens to become involved in managing their local natural resource base.

This study also suggests additional form(s), beyond formal stewardship education programs, in which learning opportunities for community stewards could take. For a number of reasons, not merely limited to time constraints, some community members, however eager to learn, may be hesitant to engage in formally sanctioned programs.

Curriculum developers and planners of environmental education offerings, especially those targeting adult community members who have been out of the formal education system, need to be mindful of these issues, and this study provides a number of relevant insights.

Summary

This study has been undertaken in the spirit of coming to understand more about what it means to be a committed, active environmental steward. Central to this exploration has been an assumption that there are patterns of sustained involvement and ongoing learning, regardless of organization, mission, program focus, or geographic location.

One of the most encouraging findings to come out of this research process is that people from all walks of life, including a variety of levels of formal educational attainment and professional backgrounds, are deeply concerned with the state of the natural world. Two of the most important reasons given for this concern and commitment were a deep love of place and a desire to leave a positive legacy for future generations. Both of these qualities are central to the stewardship ethic.

Beyond this, it is also encouraging to note that once this concern and commitment become manifest, participants in stewardship groups are undaunted by challenges presented by their formal educational and/or knowledge background. Stewards take advantage of a range of available learning opportunities, both formal and informal, structured and unstructured. Others rely more on their life experience to guide their action and to determine the ways in which they will contribute. In the end, virtually no one is left feeling that their education limits their potential to contribute in meaningful, productive ways.

Finally, although an attempt has been made to discern patterns, and while these patterns have a strong potential to inform curriculum developers and course planners of environmental stewardship education programs, this study offers another opportunity.

Perhaps the most significant contribution it will make is in presenting a forum for the voices of thirty articulate, passionate, engaged environmental stewards to be heard. Their stories are frequently fascinating, their comments

often deeply moving. Individually and collectively, their accomplishments are nothing short of remarkable. They have much to teach us.

CHAPTER 2

LITERATURE REVIEW PART ONE: THE MEANING AND EVOLUTION OF ENVIRONMENTAL STEWARDSHIP

Introduction

This chapter will explore the literature on stewardship, and will make an effort to draw out key philosophical principles guiding its evolution as a concept. Pivotal historical periods and turning points affecting the evolution of the stewardship concept and an ecological conscience will also be briefly highlighted.

Stewardship, as a philosophy guiding social action, does not exist in a vacuum. Hence, the literature of other ideas and/or areas of study will be examined in the following chapter in order to highlight their relevance to stewardship. These will include works on civil society, social capital, and adult learning theory.

As a philosophy of stewardship takes hold, on an individual or community level, and social actors begin to gain a sense of their potential for agency, the role of social capital in fostering and sustaining community involvement becomes critical. Groups that are part of local, national and global civil society play an essential part in an at times barely perceptible, but nonetheless effective Gramscian counter-hegemonic and fundamental shift in structures and paradigms.

Adult education, with its belief in lifelong learning, the transformative power of learning in adulthood, and the importance of ongoing learning opportunities for adults as critical to a healthy democracy, has important

implications for curriculum and program design for concerned citizens seeking to become active stewards.

Finally, we will briefly touch upon examples of the stewardship concept taking hold in places outside of community groups and global civil society. Increasingly, programs have been established for environmental stewardship education, as opposed to merely environmental education. The important distinction, as we shall see, is that the latter allows both adults and children to proactively participate in community initiatives, such as a river cleanup as opposed to merely receiving information or having their awareness raised.

In addition to this positive trend in K-12 schools and community outreach programs, there has been a rise in the stewardship movement in private sector corporations. This has practical implications for the way resources are used in the private sector, philosophical implications for the way business is conducted, and implications for relations between "line workers" and management.

Definitions

Stewardship, like other concepts that have enjoyed an increasing visibility in both the development and natural resource management discourses in recent years (i.e., sustainability), is a word that is used rather loosely and not always commonly understood.

One writer traces its English origins to the Old Norse "sti-vardr" – "keeper of the house", which first began to appear in manuscripts in the 11th century (Hall, 1982, p. 22). In this, "vardr" meant ward, and "sti" was house. This made its way into Old English as "stig-weard", also meaning "keeper of the house." By

the mid-15th century, it had evolved to its current spelling, and meant an estate administrator or land manager (Murray, 1993, in Kazakis). This term had been translated from similar terms in both Hebrew and Greek. The most common Hebrew terms are *ha ish asher al* ("the man who is over") and *asher al bayith* ("who is over a house"). Closer to a direct translation is the Greek term *oikonomos*. This is exactly the same term from which economics comes.

> The *oikonomos* has responsibility for the planning and administering (putting into order or *nomos*) the affairs of a household (*oikos*). Not only does this suggest that "economics" (*oikonomia*) is a significant part of Christian stewardship; it means that what we call 'economics' is more than that term usually connotes today. Reflecting upon the word picture as such, we might say that stewardship has not only to do with money, budgeting, and finances but with the whole ordering of our life....Beyond that, when one considers that this same *oikonomia* is linguistically close to the term ecumenical (*oikumene*) one has a good deal to contemplate on etymological grounds alone (Hall, 1982, p. 23).

A cursory review of dictionary definitions does not shed much additional light. Random House gives us, among others, the following three definitions for the word "steward": "A person who manages another's property or financial affairs; one who administers anything as the agent of another or others." "A person who has charge of the household of another, buying or obtaining food, directing the servants, etc." "A person appointed by an organization or group to supervise the affairs of that group at certain functions (Flexner, 1987, p. 1868)." Webster's offers us "One called to exercise responsible care over possessions entrusted to him (a ~ the time, talent, and treasure entrusted to his care) (Gove, 1961, p. 2240)."

This last is supported by a similar definition of stewardship, also in Webster's, revealing to some extent the Biblical roots of the term: "The aspect of religious life and church administration dealing with the individual; responsibility for sharing systematically and proportionately his time, talent, and material possessions in the service of God and for the benefit of all mankind (Gove, 1961, p. 2240)."

The Microsoft Word Thesaurus offers home management as a synonym for stewardship. Other synonyms include administrator, caretaker, warden, and custodian (Microsoft Corporation, 1997). All of these dictionary definitions can be analyzed, to some extent, as containing kernels of the more profound notion of stewardship now in widespread use. The notions of "exercising responsible care" over "possessions entrusted to him", of a "caretaker", or one who gives of "time, talent, and treasure" can all be interpreted as antecedents of the current stewardship concept.

Certainly, the nature of culture, society, and economic activity is dynamic. Hence, a static definition of stewardship is inappropriate. It is better thought of as a state of mind, a courageous willingness to meet new challenges, to adapt to new crises as they emerge.

As we shall see, it is about nurturing and about intergenerational equity.

> I believe [the underpinnings of stewardship] to be honor, duty, and courage. Stewardship is never as easy as signing a check to your favorite cause but is rather a way of seeing, thinking, and acting on this planet. It is not a static view; its definitions and actions are continually redefined by wider experiences and more knowledge. Stewardship is not confined to any regional border. Its value is as relevant to the inner cities of America as it is to the mountains of Montana. Stewardship's limitations or applications are dependent

> on our choices. With this understanding comes the responsibility to become the teacher while remaining the student. [However] these are just words, valueless really, until our deeds give them life. It is ultimately, and finally, our choice. (Katakis, 1993, p. xii).

In conclusion, stewardship has been defined and interpreted in a variety of ways, meaning different things to different people. Yet at its core, common themes of trust, responsibility, and guardianship pervade all definitions. In synthesizing the above, we can arrive at a definition of stewardship that will reflect the understanding we wish to convey throughout this literature review. Stewardship is an individual belief in the connectedness of all things in the natural world. Its adherents seek continuously to improve their knowledge and understanding of this connectedness, in order that they may engage in action to affect positive environmental and social change[2]. Stewards are driven to do this by their love of the Earth and their sense of responsibility to preserve its wealth for future generations.

The History and Evolution of the Stewardship Concept

Biblical Roots. The terms "steward" or "stewardship" appear approximately 26 times in the Bible, with the earliest passages being in Genesis, Chapters 43 and 44 (Hall, 1982, p. 17). To understand the fundamental importance of the stewardship concept to Judeo-Christian thought, it is important to reflect briefly on the nature of our existence and the way that the Bible attempts to come to terms with the apparent contradictions inherent in our lives. To do this, we need to return to the idea that stewardship is best understood in a dynamic, process-oriented way, as a praxis.

> Because we *live*...there must always be this openness, this possibility of accentuation and variation, this unpredictability. Our existence is a *process* – a dynamic and not a static thing....In light of this ongoingness, we may say that the best biblical metaphors for the human condition...are those in which the dynamic, the *Sic et Non*, the process-character of life is inherent. This almost invariably means *relational* metaphors...It is amongst such metaphors that the concept of humanity as 'the steward' should be placed in biblical thought...No, the Adam is not Master; Yes, the Adam is a type of servant; but No, the Adam is not just a slave, a mechanical puppet; Yes, the Adam is responsible and accountable to Another; No, the Adam is not *just* one of the others; but Yes the Adam is also creature...(Hall, 1982, pp. 16-17)

In the Old Testament, stewards are frequently portrayed as servants. These are more or less literal, rather than metaphorical or symbolic portrayals. But even here, stewards are more than ordinary servants. They are given significant responsibility, often put in charge of and accountable for the estate of their master, who may be a king or ruler. For example, in I Chronicles, Chapters 27 and 28, stewards are those who have "responsibility for the various properties and aspects of King David's total kingdom (Hall, 1982, p. 18)."

In these descriptions, and in additional passages (Isaiah 22:15f) that warn of the dire consequences for stewards who begin to see their position as an opportunity to seize power, "certain qualities of stewardship are implied: humbleness of spirit, lack of pretension and ostentation, "fatherly" behavior towards those for whose welfare the steward is responsible, etc. (Hall, 1982, pp. 18-19)."

In the New Testament, the symbolic import of the term becomes increasingly manifest. A variety of additional shades of meaning of stewardship emerge. In Luke, although the terms steward and servant are used

[2] This stament is made to acknowledge the inseparability of environmental issues from social issues.

interchangeably, stewards are given great authority. Yet, they also bear much responsibility. "Every one to whom much is given, of him will much be required; and of him to whom men commit much will they demand the more. (vs. 12:48b, as quoted in Hall, 1982, p. 20)."

In I Corinthians 4: 1-2, Paul says "...let no one boast of men. For all things are yours, whether Paul or Apollos or Cephas or the world or life or death or the present or the future, all are yours;...(3:21-22, as quoted in Hall, 1982, p. 20)." Through this passage, we can begin to detect the symbolic weight behind the word stewardship that was necessary for environmentalists to adopt it as their own. As Hall notes, "this is perhaps the supreme ecumenical-ecological statement of the Bible. We are all bound up with one another. (Hall, 1982, p. 20)."

A symbolic dimension of participation emerges from the following passage, in which Paul addresses the Ephesians, "For this reason I, Paul, a prisoner of Christ Jesus on behalf of you Gentiles, assuming that you have heard of the stewardship of God's grace that was given to me for you, how the mystery was made known to me by revelation, as I have written...(3:1-2) (as quoted in Hall, 1982, p. 21)." The steward, being part of the "household of God" shares "this grace" with others, and by accepting that shared grace, they too are brought into the "household of God" (Hall, 1982, p. 21).

The Greek Influence on Western Christianity and Attitudes Towards Nature. The western Christian (as distinct from the eastern Orthodox) worldview does not exist in a vacuum. It has been influenced by individual thinkers and

historical events dating back to the Greeks. Four distinct schools of thought from the Greeks may be seen as having varying degrees of influence on western attitudes towards nature. These include the Platonic, Aristotelian, Stoic, and Epicurean.

For Plato, humans had a soul, which was distinct from their body and the rest of nature. Nature was dynamic, ever-changing, and therefore imperfect. However, some order could be seen. What order there was in nature could be explained by the Forms, an eternal, ideal, perfect world that man is initially incapable of seeing or understanding. Nature thus gets in the way of man's intellectual pursuit of an understanding of the Forms, which is the ultimate goal of man's existence.

Besides deductive reflection towards an ever-growing understanding of the Forms, man's role is to bring order to nature. Thus, through the actions of the ordering intellect, man can bring form to chaos. Man's interaction with nature is largely limited to attempts to impose order upon it, to somehow interpret the Forms through this ordering (Wilkinson, pp. 114-117). Greek architecture is one example of this need for order, and this attitude toward nature, it may be argued, is pervasive to the present in much of western socioeconomic activity.

The Aristotelian view of nature may be seen as much more benign. The true form of a thing is in nature. Things are substances, and their forms are what make them unique. One gains knowledge of the forms through a sensory interaction with nature, not through a deductive search for the ideal. Humans are distinct from other animals in that they are rational animals. Everything in nature

has a purpose. It is up to us to determine these purposes, as "the universe, for Aristotle, appears to be a great work of craftsmanship – but with no craftsman (Wilkinson, 1991, p. 120)."

This teaching may, however, be interpreted two ways. In keeping with the largely benign character of Aristotle's ideas, man's rationality may be used to study and reflect upon nature (in keeping with the tenets of stewardship). Conversely, nature may be seen as at the disposal of man to fulfill his purpose(s). This is more in keeping with utilitarian views of nature and, insomuch as this is seen as a legitimate interpretation of Aristotle, it may have contributed to a destructive understanding of man's relationship with nature.

The Stoics believed that there was a divine, ordering principle, or *logos*, which is "the source, pattern, and goal of all things, including humans (Wilkinson, 1991, p. 121)." People were to strive towards living their lives in ever-greater harmony with the earth and the universe. Because everything is divinely ordered, there is a purpose for everything in the world. Because man is the only rational creature (along with the gods), the world, in all its purpose, is nevertheless for him.

Yet unlike Aristotle, there is a clear understanding that man's use of nature must be taken with great care. Men were the "appointed tillers of the soil (Cicero, as quoted in Wilkinson, 1991, p. 122)" and were to tend and maintain it. The idea of a divine order in nature, of "laws of nature", is one that is still prominent to this day (Wilkinson, 1991, pp.121-123).

For the Epicureans, all things were composed of atoms, including humans. While there is order in the movement of atoms and the things they form, there is no Form, purpose, or divine logic in this ordering. There is thus no obligation of stewardship towards nature. Since man has no divinely guided purpose on the Earth, the goal of man's existence is simply to live as comfortably as possible. This attitude may be seen as pervasive in some strains of modern scientific research and its view of nature (Wilkinson, 1991, pp.123-124).

The influence of Greek philosophy and thought on the Christian worldview can be historically traced to "the Hellenistic culture...that mishmash of Egyptian, Persian, Greek, and other cultures created, largely, by the military exploits of Alexander the Great (Hall, 1982, p. 31)."

As Christianity began to spread beyond the borders of Israel, its messengers understood the need to adapt to the pre-existing cultures in which it began to be practiced, "for nobody ever shares an idea, experience, or world view without losing some of its original meaning and gaining other connotations that stem from the assumptions of the receiving party (Hall, 1982, p. 31)."

One example of this is that pagan holidays were baptized with Christian names and meanings, but essentially carried the same underlying significance as they had when they were pagan festivals. This kind of adaptation of Christianity to pre-existing cultures can be seen right up to today, where it is practiced very differently in parts of Latin America and Africa than it is in North America or Europe.

Secondly, beyond this kind of adaptation, basic tenets of belief were influenced by cultures into which Christianity entered. For example, the concept of sin, adapted to Greek culture, came to mean personal failure or inability to live up to one's potential, whereas in the Hebraic tradition, it meant "the radical breaking of a relationship – disobedience, rebellion against God, confrontation, and alienation (Hall, 1982, p. 31)."

This focus on the individual (as opposed to the Hebraic focus on the relational), combined with the Platonic separation of the mind from nature (the "spiritual" as opposed to the Hebraic "material"), can be seen as contributing to the inability of Christians to hold to a praxis of stewardship. People concerned with individual salvation and believing deeply in the baseness of the natural world are unlikely to think of themselves as keepers of the house.

The second critical influence on early Christianity can be traced to the Roman Emperor Constantine's adoption of Christianity as the official religion of the Empire in 313 A.D. Prior to this, the practice of Christianity was voluntary and at times risky. This led to a shared sense of stewardship of the faith itself among believers, as well as a need for community in order to oversee organizational and resource-pooling activities. Once the Empire became the official sponsor of Christianity, however, a strong sense of responsibility for the fate of the belief system and institutions of Christianity began to dissipate over time, as people began to feel that they could rely on their political leaders to support it.

Further, before Christianity became an established and officially designated religion, it may be seen to have included only true believers among its followers, in an ongoing praxis with their faith. Because of their location outside of the "mainstream" social world of their day, the potential for empathy with the poor and disenfranchised (and perhaps, by extension, their relation to the natural world) was inevitably greater.

However, under political sponsorship, there is much less likelihood that a belief system can challenge the State through which it is officially sponsored. It is likely that any passages from the Bible that could be interpreted as reflecting negatively on the Empire were disavowed, or at the very least, not emphasized.

Additionally, official sponsorship meant a growth in membership to the majority of citizens, who may have found it politically expedient to join the Church, but never really adopted its worldview. Over a few generations, this could lead to a culture of practice without reflection, of stated beliefs without an underlying understanding of the meaning of the metaphors and symbols of the Bible (Hall, 1982, pp. 34-37).

Finally, a fundamental difference has been suggested between Greek Orthodox Christianity and the Latin Church, perhaps explaining why science and technology did not see the same rapid advance in that part of Europe where eastern Christianity was prominent as it did in Western Europe.

> The Greeks believed that sin was intellectual blindness, and that salvation was found in illumination, orthodoxy – that is, clear thinking. The Latins, on the other hand, felt that sin was moral evil, and that salvation was to be found in right conduct. Eastern theology has been intellectualist. Western theology has been

> voluntarist. The Greek saint contemplates; the Western saint acts (White, 1974, p. 26).

A theology stressing salvation through action implies *use* of natural resources to "better" man's material condition (and hence make the possibility of salvation more likely), as opposed to a shared sense of stewardship in harmony with the natural world.

Medieval Attitudes Toward Nature and Science. The medieval view of nature was derived from Aristotle and the Stoics, combined with Christian notions of creation. There was order in everything. This order, while complex, was unchanging. While there was movement in nature, it was all part of an unmoving order. The microcosm of the individual was influenced by the macrocosm of the larger world, and people's personalities corresponded to elements in nature.

Because of this correspondence, it was clear that everything and everyone had a place in nature. Hence, there was no desire to change an unchangeable order, nor to study it empirically, since deductive conclusions were seen as equally legitimate as inductive conclusions. The medieval world was a closed world, and because of the inherent order of nature as understood by medieval man, there was no sense of the unknown, and hence no desire for greater understanding or exploration.

Medieval science was given, like Platonic reasoning, to moving towards an understanding of unchanging, eternal principles. Those who were in a position to theorize about these principles had a general disdain for physical labor, and there was no felt need to apply research or acquired knowledge about nature to improved methods of labor. Laborers simultaneously were unable to read and did

not have access to existing knowledge, even if they would have been motivated to try to apply it to improving their condition. Those few improvements in technology that can be traced to the Middle Ages were in fact achieved by craftspeople, in spite of the limits of their access to knowledge (Wilkinson, 1991, pp. 129-137).

One important exception to this prevalent medieval view of nature, which is an important precursor to modernity, can be found in the activities of Benedictine and Cistercian monasteries. These orders felt a Platonic need to bring order to nature, to transform it into a bountiful paradise; this was seen as a divine calling.

> Most significantly for the development of the West, it was in the Benedictine monasteries that complex machines were first used on a large scale for the processing of nature. Perhaps the most important of these was the monastery clock, which served the practical function of arranging the hours of prayer, but had the long-range consequence of rationalizing and segmenting time (Wilkinson, 1991, p. 136).

It was also in the eleventh century that "the West began to apply water power to industrial processes other than milling grain" and when "a massive movement of translation of Arabic and Greek scientific works into Latin" occurred (White, 1974, pp. 20-21).

European Expansion, The Protestant Reformation, and the Scientific Revolution. A critical shift took place in the 15th century, when European states began exploring previously "undiscovered" areas of the world. As people became aware of new lands, new peoples, and new species of flora and fauna revealed through these voyages, it was no longer possible to hold on to the kind of closed

view of the world so prevalent in medieval times. A realization took place that there was literally a world to be explored and learned about.

This, combined with the fact that it was, by and large, practical men making these voyages with more utilitarian ends in mind (as opposed to the medieval philosopher/scientists, whose "research" was aimed at discovery of and greater understanding of eternal truths, and who had a disdain for physical labor). This combination of factors paved the way for radical new ideas to emerge which would directly shape the dawn of the modern era and the industrial age.

A second critical turning point came with the Protestant reformation of the 15th century.

> The Reformers felt that God's redemptive actions come not from rational necessity, but rather from God's overflowing – and, in human terms, his *unreasonable* – love…. God is to be known only through his action: his self-revelation. The primary source for that revelation is Scripture, the Book of Revelation. But another important source is the physical world, the Book of Creation (Wilkinson, 1991, p. 147).

This shift in the Christian worldview prefigured the rise of the scientific method. A clear elaboration of this shifting attitude can be found in a statement made by Francis Bacon:

> …we must entreat men again and again to discard, or at least set apart for awhile, the volatile and preposterous philosophies, which have preferred theses to hypotheses, led experience captive, and triumphed over the works of God; and to approach with humility and veneration to unroll the volume of the Creation, to linger and meditate therein, and with minds washed clean from opinions to study it in purity and integrity (Bacon, as quoted in Wilkinson, 1991, p. 147).

Ironically, then, from the 13th century on, inventors such as Friar Roger Bacon, Galileo, and Newton considered themselves theologians as much as

scientists, and "explained [their] motivations in religious terms (White, 1974, pp. 26-27)."

Another important transition also occurred around this time. Whereas the early church had seen nature as a "symbolic system through which God speaks to men", which they referred to as natural theology, this natural theology shifted towards "the effort to understand God's mind by discovering how his creation operates (White, 1974, p. 26)."

With the emergence of modern science, then, came a fundamental paradox. To some extent, the roots of the desire to know the true nature of the world sprung from a rejection of the Platonic notion of the separation of mind/soul from body/earth. In its most benign form (and prefiguring the thinkers soon to be discussed), this was reflected in the philosophy and actions of St. Francis of Assisi and his followers. They sought, through careful observation of nature and its creatures, to come to a greater understanding of man's place in nature, or the Creation. One writer has gone so far as to suggest St. Francis of Assisi as "a patron saint for ecologists." "His view of nature and of man rested on a unique sort of pan-psychism of all things animate and inanimate, designed for the glorification of their transcendent Creator (White, 1974, pp. 30-31)."

Yet this quest for a greater understanding of the Creation could be far more malevolent than the worldview of St. Francis. It led to actions, in the name of the search for observable, empirical truth, which were increasingly divorced from any feeling of kinship with nature and its creatures. This culminated with the actions of the disciples of Descartes. Seventeenth century Cartesian scientists

"administered beatings to dogs with perfect indifference and made fun of those who pitied the creatures as if they felt pain.... They nailed poor animals up on boards by their four paws to vivisect them and see the circulation of the blood which was a great subject of conversation (Lafontaine, as quoted in Wilkinson, 1991, p. 155)."

Hence, a complete transition had been achieved by the time of Descartes from the medieval understanding of man's relation to the natural world. Instead of seeing a pig, for example, as a warning from God about what would become of men if they were slothful and overindulgent, Cartesian scientists might now seek to understand the biology of the pig through dissection and analysis of its component parts. This was of course permissible, because nothing in nature was afforded any spiritual significance or a place in the grand scheme of things approaching that of man.

Alternatively, the advance of Cartesian science, along with the influence of Galileo and Francis Bacon, can also be seen as leading the charge towards achieving the lofty and noble goals of liberating mankind forever from the chains of political and religious oppression. This would occur through greater access to learning opportunities, knowledge and information, and knowledge production. Ironically, however, these ideas and their incorporation into western culture were in large part responsible for the evolution of an ethos that has oppressed modern man through the religion of rationality, science, and technology.

> Historically, Francis Bacon's proposed union between knowledge and power foreshadowed the contemporary alliance between government, business, and knowledge that has wrought so much mischief. Galileo's separation of the intellect foreshadowed the

> dominance of the analytical mind over that part given to creativity, humor, and wholeness. And in Descartes's epistemology, one finds the roots of the radical separation of self and object. (Orr, 1994, p. 8).

The historical cultural shifts spearheaded by these ideas led to the acceptance of several "myths" which generally came to be accepted as facts in modern Western culture. These myths have come to have a strong influence on the goals of the formal education system, as well as goals for adult education and training. The first myth is the notion that ignorance is solvable. For example, by going through four years of college, or additionally receiving a Master's or Ph.D. degree, we have learned all there is to learn. Once one is certified by the formal education system as an expert in a certain field, then one has learned all one needs to know. The desire to pursue lifelong learning and the humility to question the extent of one's knowledge are greatly reduced under this assumption.

Second is the belief that earth can be managed with enough science and technology. This assumption has led to the production of PCBs and other man-made organic chemicals for which we still have not determined ways to permanently remove from the environment or break down in a timely manner.

Third, there is a confusion between an information explosion, increasingly aided and abetted by the Internet, and knowledge and wisdom, which are far more profound and deeper, and may not in fact be expanding at anything like the pace of information.

Fourth, there is the unwavering faith, especially in higher education, in disciplines and specialization, which prevents students from gaining anything like a holistic or comprehensive view of the world we live in, and the inter-relatedness

of biological, physical, and chemical processes. This in turn leads to national accounting systems that view the destruction of habitats and ecosystems as externalities.

A fifth myth is that education is merely a means to upward mobility and success, and that it has no deeper purpose, such as instilling a set of values and/or ethical principles in students. "Finally, there is a myth that our culture represents the pinnacle of human achievement (Orr, 1994, pp. 8-12, quote taken from p. 12)."

The history of Western science and the evolution of largely Christian nations'/peoples' attitudes towards nature should not, however, be analyzed without putting these processes in a local context. Because western science and its accompanying worldview have come to dominate global geopolitics over the past 200 years or so and will continue to do so for the foreseeable future, it is essential that some attempt to set this worldview in its cultural and historical context be made.

Harding suggests a number of local conditions that help to determine the way that "science" evolves culturally and develops epistemologically in a specific place and for a specific people. First, "different cultures are located in different parts of nature (Harding, 1996, p. 41)." Cold, harsh winters in northern Europe, and their accompanying discomfort, may be seen to have contributed to a cultural goal of dominating nature as much as religious beliefs. At the same time, cultures of rain forests, wherein food is readily provided by nature and wherein the need

for shelter never requires a search for fossil fuels or insulation, may more easily reach a kinship with the natural world[3].

Secondly, "they have different interests in observing and explaining even 'the same' of nature's regularities (Harding, 1996, p. 441)." Some cultures may see a stand of virgin forest as merely a source of wood for building houses or for other construction. Some may harvest its resources for obtaining firewood. Some may see certain kinds of trees or even entire forests as sacred, likely to offend spirits if their resources are tapped.

Third, "cultures can draw on different discursive traditions through which to observe and explain nature's regularities (Harding, 1996, p. 441)." Christian cultures, as we have seen, have come to a vastly different understanding of their relationship to the natural world than, for example, animist cultures.

Fourth, "they can give to their projects culturally different ways of organizing the production of scientific and technological knowledge (Harding, 1996, p. 442)." Indonesian farmers may organize collectively to undertake participatory action research to determine the impacts of a pest on their crops and share the results of their findings collectively and with neighboring communities. Graduate students, research associates, and faculty at western universities may, on the other hand, jealously guard their research projects, instruments, and findings in order to assure that they and they alone will be credited with discovering any important findings.

[3] Clearly, this local context factor does not in and of itself explain anything. Native American and Inuit groups of North America are just two examples of peoples of the North who did not feel a need to pursue an industrial revolution the way Europeans and North American settlers did. Still, it is worth wondering whether or not, in the absence of cold winters, the evolution of western philosophy and Christian thought described above would have occurred the way it did, and whether an industrial revolution would have occurred at all.

Finally, "their epistemological standards are part and parcel of these other culturally distinctive resources, themselves shaped by different locations in nature, interests, discursive resources, and ways of organizing the production of knowledge, as they, in turn, shape them (Harding, 1996, p. 442)." Thus, entire bodies of scientific knowledge form around these contextual conditions, and once formed, then begin to influence the very contextual conditions from which they emerged. Western science, then, from which the scientific method was born, despite all of its insistence on objectivity, empirical investigation, and rational explanation, may be seen as merely one more local cultural (indigenous?) tradition.

One additional point is worth making in order to put further into context the dominance of western science. According to Harding, many researchers have traced European expansion, and the subsequent rise in Europe's body of scientific discovery and knowledge, with the concomitant decline in scientific discovery of other parts of the world. "Power creates certain kinds of resources for the advance of socially situated scientific and technological knowledge and destroys other kinds of resources. It creates resources and limitations for the growth of knowledge (Harding, 1996, p. 440)." Thus, European colonization disrupted the flow of scientific discovery in numerous cultures by its presence alone, not to mention the likely harm caused by ongoing resource exploitation and attempts at cultural domination of the colonized.

The New World. Francis Bacon's belief in knowledge as power can be said to have guided the Puritans' approach to settlement of the New World,

wherein the presence of an untamed, abundant wilderness provided a "proving ground" for the settlers to battle, conquer, and become masters of the natural world.

> Like Bacon, the first American Puritans saw the recalcitrance of nonhuman creation as a consequence of sin; indeed, the whole New World, with its tangled forests and untamed beasts, became a kind of metaphor for the human heart, which, since the fall, was desperately wicked. To attempt to build a place to live, a commonwealth, in such an environment was a fearsome task for the first settlers. (Wilkinson, 1991, p. 163).

With such attitudes towards nature, it is not surprising that the first settlements established in North America were seen as "the first victories in a promised land (Wilkinson, 1991, p. 164)."

Further insight into the North American Protestant attitude toward nature, at least well into the 19th century, can be gained from Max Weber's analysis of their interpretation of Calvinist doctrine:

> ...the Calvinist doctrine of divine election, though giving no guarantees about eternal salvation, is nevertheless accompanied by a promise that God will materially bless those he has chosen. This promise places a sort of pressure on earnest Christians to regard every occupation as a sacred calling, requiring them to work hard, be frugal, and make the most of those bits of creation given into their stewardship – not primarily for the creation's sake, but as a confirmation of their salvation. Accompanying this single-minded pursuit of wealth for spiritual reasons is a reductive rationality which encourages those Baconian and Cartesian tendencies to simplify the diversity of creation into machine-like components that could be easily understood and controlled (Wilkinson, 1991, p. 166).

The establishment of a Christian foothold in the New World, divorced from the official sponsorship of established European churches, led to a new emergence of stewardship.

> By comparison with European forms of Christian establishment, the churches in North America have been independent, separate, and voluntary organizations whose members have themselves been directly responsible for their maintenance. Therefore, Christian bodies had to develop structures and programs that encouraged the support of their membership and facilitated their...stewardship! (Hall, 1982, p. 2)

Nevertheless, this was (and in many ways still is) a very practical interpretation of the term. Churchgoers are encouraged to give of their time, talent, and treasures, but not to engage in a praxis of stewardship.

By the mid-19th century, however, with the firm establishment of the American state as a participatory democracy[4] wherein freedom of religion was constitutionally guaranteed, this freedom also guaranteed the right of citizens to not feel obligated to adopt a religion. For Christian institutions in North America, this rise of "secular humanism" signaled an opportunity, in fact à necessity, to begin to re-examine, towards a much deeper interpretation and understanding, fundamental Christian concepts. If people were not required, or did not feel cultural pressure to remain a part of, an established Church, then these institutions needed to offer them profound spiritual messages in order to maintain and/or attract new members (Hall, 1982, pp. 38-40). This has been referred to by one Christian scholar as the "Great Stewardship Awakening" (Salstrand, as cited in Hall, 1982, p 40).

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[4] The emergence of democracy also had an important influence on the practice and orientation of science:

> Science was traditionally aristocratic, speculative, intellectual in intent; technology was lower-class, empirical, action-oriented. The quite sudden fusion of these two, towards the middle of the 19th century, is surely related to the slightly prior and contemporary democratic revolutions which, by reducing social barriers, tended to assert a functional unity of brain and hand. Our ecologic crisis is the product of an emerging, entirely novel, democratic culture (White, 1974, p. 19).

At the same time that these wheels were turning in North American religious institutions, a nostalgic longing for a frontier that was rapidly disappearing in the 19th century propelled the Transcendentalist movement and the initiation of the practice of setting aside untouchable, unexploitable, undevelopable wilderness areas. Transcendentalism is rooted in the European Romantic movement of the 18th century.

While agreeing with the Cartesian/Baconian idea of the mind's separation from nature, this movement saw the purpose of this separateness as allowing for the possibility of an ever greater appreciation of the beauty of nature, through the mind's powers of imagination and creativity (Wilkinson, 1991, p. 172). Thoreau and Emerson adapted these ideas into the American philosophy of transcendentalism. While also acknowledging the separateness of mind from nature, transcendentalism allowed for access to a spiritual understanding of the power and beauty of nature that went far beyond any coarse, merely utilitarian interpretation of the meaning of the natural world (Wilkinson, 1991, p. 172-173).

Towards the end of the 19th century, wilderness set-asides became a reality, as first the Adirondack preserve, and then Yellowstone National Park, were created. A key figure contributing to the growth of this movement was John Muir, the founder of the Sierra Club. His writings on the spiritual nourishment that we attain through our interaction with the natural world, and especially with wilderness areas, his key role in the establishment of Yosemite National Park, and his influence on President Theodore Roosevelt's conservation policies, have left an indelible mark on the environmental movement. Yet there is an irony here,

which many writers have noted. That is that this long-established policy of wilderness set-aside areas has contributed to a sense, even now present among many Americans, that the rest of nature is to be utilized, rationed, and disposed of as society sees fit (Wilkinson, 1991, p. 174).

The Legacy of Aldo Leopold. The transition to the current understanding of stewardship as a philosophy with the potential to guide man's relationship to the natural world can be traced to the publication of Aldo Leopold's essay, "The Land Ethic", which appeared in *A Sand County almanac*, originally published in 1949. A number of writers have commented on the seminal nature of this piece.

> [Taking Thoreau's statement that 'in wildness is the preservation of the world',] Aldo Leopold made it the basis for a unified philosophy of shared community. Here was the proposition: our role is not to be consumers of nature, as we had learned in Sunday school from the Book of Genesis, but rather to be caretakers of nature for the unborn, who should have the opportunity to see and enjoy the land as their fathers and mothers did.... The word *stewardship* began to take on a new meaning...it carried with it the sense of passing on the earth not as a jealously guarded plat of private property, but as a priceless shared gift to posterity (Murray, 1993, p. 263).

The idea of a land ethic is fundamental to our understanding of stewardship. "The great fault of all ethics hitherto has been that they believed themselves to have to deal only with the relations of man to man (Schweitzer, as quoted in Spring and Spring, 1974, p. 1)." Leopold extended Schweitzer's lament, beginning his essay with the following:

> When god-like Odysseus returned home from the wars in Troy, he hanged all on one rope a dozen slave-girls of his household whom he suspected of misbehavior during his absence. This hanging involved no question of propriety. The girls were property. The disposal of property was then, as now, a matter of expediency, not of right and wrong (Leopold, 1966, p. 217).

Leopold goes on to note that, although in the 3,000 years that have passed since Odysseus' actions, we have extended ethics to virtually all of humanity, we have yet to see ourselves as merely one species in the web of life. The clear implication is that we will do profound damage to ourselves and to future generations if we can't move towards a fundamental shift in our relationship to land and natural resources.

> All ethics so far evolved rest upon a single premise: that the individual is a member of a community of interdependent parts. His instincts prompt him to compete for his place in that community, but his ethics prompt him also to co-operate (perhaps in order that there may be a place to compete for). The land ethic simply enlarges the boundaries of the community to include soils, water, plants, and animals, or collectively, the land.... A land ethic of course cannot prevent the alteration, management, and use of these 'resources,' but it does affirm their right to continued existence, and, at least in spots, their continued existence in a natural state. In short, a land ethic changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such (Leopold, 1966, p. 219).

This, then, is the foundation upon which our current understanding of stewardship rests. It reflects an ethical, perhaps even spiritual, relationship to our land and natural resources. Other notable voices have echoed this call for a "revised ethic and aesthetic (geographer Carl Sauer, as paraphrased in Spring & Spring, 1974, p. 2)" and "profound spiritual change (philosopher Claude Levi-Strauss, as paraphrased in Spring & Spring, 1974, p. 2)."

<u>The Bible as the Source of Destructive Attitudes Towards Nature: Arguments and Counter-Arguments.</u> The previous pages have attempted to provide a cursory review of critical historical turning points, schools of

philosophy, and individual thinkers that have had the most profound impacts on western Christianity and culture, especially as regards attitudes towards the natural world. The development of the Western world has been inseparably linked to the evolution of Christianity. At the same time, the socioeconomic development of much of the rest of the world, since colonial times, has been inseparably linked to the Western world, with all that this implies for natural resource use as part and parcel of the development process. Hence, it is helpful to have some understanding of the roots of the West's belief system, especially regarding the natural world, since this worldview continues to manifest a truly global influence.

While stewardship may be seen as a fundamental Christian concept, worthy of an ongoing praxis among all Christians, it is also clear that it has not always been embraced. Further, there are other passages in the Bible that are considered by some to have been far more influential, and which encourage very different attitudes towards nature.

All human societies have had some impact on the natural world since the dawn of time, dating back to the fires started by hunters in the Pleistocene, which may have led to the extinction of a number of mammals (White, 1974, p. 16).

However, it has been argued that the roots of the environmental crisis can be traced to passages of the Judeo-Christian Old Testament, which, in selected verses, sent a clear message to the faithful that they were somehow above nature and that it was in fact their obligation to master it. God's instruction to Adam, "Be fruitful, and multiply, and replenish the earth, and subdue it: and have

dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth" is taken from Genesis 1:28.

Also, "And the fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air, upon all that moveth upon the earth, and upon all the fishes of the sea; into your hand are they delivered" is God's comment to Noah after the flood (as cited in Singer & Singer, 1974, p. 4). While these passages may or may not have single-handedly influenced centuries of Christian belief and attitudes towards nature, they certainly have been interpreted as having done so.

There is, however, a strong counter-argument, which needs substantial elaboration. There are numerous Biblical passages which, if read properly, lend credence to the view that God, through the Creation, is immanent in nature and that man's dominion implies a responsible stewardship, not a carte blanche to recklessly despoil nature for his own ends. Any use of the bounty of nature should be to meet the needs of man, and reaping its harvest should be undertaken with great care. The Creation is not merely for man's utility, but is good in itself, as indicated by the following:

> The trees of the Lord are watered abundantly,
> The cedars of Lebanon which he planted.
> In them the birds build their nests;
> The stork has her home in the fir trees.
> The high mountains are for the wild goats;
> The rocks are a refuge for the badgers. (Psalm 104: 16-18, as quoted in Wilkinson, 1991, p. 282).

Another passage from the Bible lends strong support to the idea that nature, although man is given dominion over it, is not merely for his utility, but

contains abundant mystery, beyond the ability of man to understand, and good for its own sake:

> Who is this that darkens counsel by words without knowledge?...
> Where were you when I laid down the foundation of the earth?...
> Have you entered into the spring of the sea,
> or walked in the recesses of the deep?...
> Do you know when the mountain goats give forth?
> Do you observe the calving of the hinds?...
> Is it by your wisdom that the hawk soars,
> and spreads his wings toward the south?
> Is it at your command that the eagle mounts up
> and makes his nest on high? (Job 38-39, as quoted in Wilkinson, 1991, p. 282)

One additional point in the counter-argument needs mentioning. In misinterpreting the meaning of dominion, it is often assumed that additional evidence supporting man's dominance over nature may be found in the statement from Genesis that man was created in the image of God. This has been taken to mean that man possesses some essential characteristics (the ability to think, to rationalize, perhaps even to love) that other creatures do not. This has led to a justification of all destructive actions, in the name of an inherent superiority (again, misinterpreted as dominion) over nature.

In fact, there are other ways of reading Genesis which point to man being equally rooted in nature. Man was created on the sixth day along with other animals, not apart from them. Interestingly, they are described as being made from the dust of the earth. The Hebrew word for earth is Adamah, and the word for man is Adam (Wilkinson, 1991, p. 284).

Hence, the idea that man is created in the "image of God" may be seen as relational rather than substantial, "it describes our unique calling to be in

responsible relationship with God, with each other, and with the rest of creation (Wilkinson, 1991, p. 285)." Interpreted this way, the notion of the image of God contains a "radical critique of every hierarchical ordering of earthly life, every elevation of one species at the expense of others, and every attempt to divinize or demonize the human creature (Hall, 1982, as quoted in Wilkinson, p. 286)."

Despite ample evidence that much of the Bible can be interpreted as supporting man's dominion over nature as a stewardship role, as an earth keeper, it is undeniable that Christians have also interpreted dominion in an entirely different light. This interpretation focuses on man as separate from nature. Man's primary purpose is to work toward individual salvation, and the gifts of Creation are at his disposal for this. Weber's analysis of Protestantism (as referenced above) may be seen as one example of this.

The Modern Nation-State, Liberal Democracy, and the Limits of the Free Market. Of course, it is worth reminding ourselves that the conditions leading up to the modern nation state and the "modernity project", which some postmodernists suggest is now rapidly drawing to a close (Usher, Bryant, and Johnston, 1997, p. 1), were far from a utopia. In fact, in many ways, it should be argued that monarchies, fiefdoms, and feudal states had to be supplanted before a more elevated human condition could emerge. In the context of natural resources management and allocation, it can be argued that forms of political organization evolve in direct correlation to population growth and, by association, a shrinking natural resource base.

> When land is abundant, the community regulates only sharing of the proceeds and defence against other groups. As land grows

> scarcer, institutions such as chiefdoms are needed to allocate it. In the final stage, use becomes permanent and hereditary. The state evolves to guarantee property rights against theft and invasion, and to resolve disputes. The control of waste sinks requires a growing degree of regional and eventually global government (Harrison, 1993, p. 247).

However, it has only been in the latter half of the 20th century, after two world wars and countless regional conflicts, that liberal democracy, with its emphasis on neoclassical, free market economics, has emerged as a predominant form of nation state. Having done so, it has largely left monarchy, communism, and fascism, along with protectionism, corporatism, and socialist centralized planning behind (Fukuyama, 1995, p. 1).

Nevertheless, this hardly constitutes "the end of history," as described by Fukuyama[5], referring to the "Marxist-Hegelian sense of History as a broad evolution of human societies advancing toward a final goal (Fukuyama, 1995, p. 1)." First, not all of the world's nations and territories have even begun to move towards liberal democracy and free markets.

Second, many democracies which have emerged in the past 20 years, both in Latin America, Africa, and Eastern Europe, are on ever tenuous ground, and their roles in the global economy are extremely vulnerable and susceptible to ever-increasing debt and unfair terms of trade.

[5] Fukuyama's analysis of the cultural conditions necessary for developing and sustaining social capital, which then allows trust to emerge as a deeply felt, shared communal value with significant implications for a nation's socioeconomic life, is quite complex, and varies from national context to national context. Hence, it is not the intent of this paper to imply that he believes that we are truly at "the end of history." Nevertheless, use of such an overarching concept, given the dynamic and often turbulent nature of world events even on an annual basis, warrants some discussion.

Third, even in deeply entrenched liberal democracies, there is a growing sense of the power of special interests to subvert checks and balances and to manipulate elected officials to achieve their ends.

Finally, and most importantly for its implications for stewardship, there is a growing understanding, led by ecologists and resource economists that "neoclassical economics is bankrupt (E.O. Wilson, as quoted in Orr, 1994, p. 75)." This is true despite Fukuyama's assertion that neoclassical economics, with its model of rational, self-interested behavior, is right about 80 percent of the time, and that the other 20 percent of human behavior can be explained through an analysis of culture (Fukuyama, 1995, p. 13).

For in the end, the modern nation state, even if achieving ever-expanding liberal democratic forms globally and greater global market autonomy (and assuming that this is all for the good of the vast majority of mankind), must work towards a new ethos. If not, the entire system will simply collapse within a matter of less than a century if world population continues to soar and if national accounting systems do not begin to move towards greater incorporation of deficits to natural resource bases caused by overproduction. The world was, after all, a very different place when the modern international system was first created.

> The modern international system was created when the world's population was five hundred million, the fastest speed attainable was by horse, and the most destructive weapon was a naval gun that could hurl an eight-pound iron ball several hundred yards. The system ratified at the Treaty of Westphalia in 1648 acknowledged the territorial state as the arbiter of the issues of war and peace. From that time until quite recently, territory has been the primary issue on the international agenda. The present, much longer agenda is dominated by issues that in one way or another

have to do with adaptation to the limits of the earth. (Orr, 1992, p. 41)

In conclusion, the history and evolution of the concept of stewardship may be traced at least as far back as the Bible, with roots perhaps even deeper in the pre-Biblical Hebraic culture. Western man's understanding of his/her relationship with the natural world has been influenced significantly by both ancient Greek philosophers and by Roman emperors.

Later, both the medieval worldview and the dawn of the age of Descartes' rationality left their indelible marks. Most recently, a struggle between the 17th and 18th century Puritan fear of nature and settlers' desire to shape the New World, on the one hand, and the 19th and 20th century romanticism and land ethic of Thoreau, Leopold, and others, took place.

These often conflicting schools of thought, and the legacies they have left in the structures and institutions of late modernity, are of a global significance. This is because of the reality of the global international system, especially since the end of World War II, and the ongoing influence of Western powers in shaping the development of the rest of the world's peoples. In the end, as indicated above, the need for "adaptation to the limits of the earth" may have a greater impact in determining what development goals nations will pursue. Certainly, stewardship takes on great significance if seen in this light.

CHAPTER 3

LITERATURE REVIEW PART TWO: CIVIL SOCIETY, SOCIAL CAPITAL, AND ADULT LEARNING THEORY

Civil Society and Social Capital

Civil society, like stewardship, is a concept that does not lend itself to oversimplification or rigorous definition. Fukuyama describes it as:

> a complex welter of intermediate institutions [between family and state government], including businesses, voluntary associations, educational institutions, clubs, unions, media, charities, and churches [which] builds, in turn, on the family…A thriving civil society depends on a people's habits, customs, and ethics – attributes that can be shaped only indirectly through conscious political action and must otherwise be nourished through an increased awareness and respect for culture. (Fukuyama, 1995, pp. 4-5)

The institutions of civil society are critical for building social capital. Further, social capital is an important foundation of "good government and economic progress (Putnam, 1993, p. 37)". This is so first because "networks of civic engagement foster sturdy norms of generalized reciprocity (Putnam, 1993, p. 37)." This can be seen in the local currency network of the Pioneer Valley, in the classic example of the Amish barn raising, or in collective harvesting of individual African farmers' fields.

Second, "networks of civic engagement also facilitate coordination and communication and amplify information about the trustworthiness of other individuals (Putnam, 1993, p. 37)." If individuals or community groups follow through on stated commitments for fundraising or other projects, especially if they establish a consistent pattern for doing so, they secure solid standing in their communities.

Third, "networks of civic engagement embody past success at collaboration, which can serve as a cultural template for future collaboration (Putnam, 1993, p. 37)." Lessons learned from past challenges will more easily allow community members to form around future issues that they feel a need to address.

Despite the importance of social capital in fostering greater cooperation among community members and social networks, with all that this implies for both improved economic activity and increased potential for affecting social change, the concept and its antecedents have traditionally been given short shrift by economists. Coleman makes this point through his discussion of Granovetter.

> Granovetter (1985) has engaged in a broad attack on the "undersocialized concept of man" that characterizes economists' analysis of economic activity. Granovetter first criticizes much of the new institutional economics as crudely functionalist because the existence of an economic institution is often explained merely by the functions it performs for the economic system. He argues that, even in the new institutional economics, there is a failure to recognize the importance of concrete personal relations and networks of relations – what he calls "embeddedness" – in generating trust, in establishing expectations, and in creating and enforcing norms. (Coleman, 2000, p. 15)

Even in cases where economists are willing to acknowledge the importance of strong social ties to economic performance, there is nevertheless a sense that market forces influence the formation and sustainability of social capital more than the reverse.

> The relations between the market and social interactions appear to be two-sided. On the one hand, modern economic theory emphasizes that even in advanced countries, the market needs supplementation (for efficiency) by nonmarket relations.... On the other hand, labor or supplier turnover in response to prices may destroy the willingness to offer trust or, more generally, to invest

> in the future of the relation. This leads to an important, long-standing question. Does the market (or, for that matter, the large, efficient, bureaucratic state) destroy social links that have positive implications for efficiency? (Arrow, 2000, p. 5)

This bleak outlook implies that, unless there is trustworthiness and a profound sense of responsibility at the macroeconomic level and at the level of national governments and/or the international system, then efforts to form and/or sustain social capital at the community or micro-level are doomed to failure.

Yet the power of social capital is that the potential for its formation lies with individuals. "It comes about through changes in the relations among persons that facilitate action…it is less tangible…[than either physical or human capital] for it exists in the *relations* among persons (Coleman, 2000, p. 19)." Its value "lies first in the fact that it identifies certain aspects of social structure by their functions…. The function identified by the concept of "social capital" is the value of these aspects of social structure to actors as resources that they can use to achieve their interests (Coleman, 2000, p 19)."

In this way, it

> constitutes both an aid in accounting for different outcomes at the level of individual actors and an aid toward making the micro-to-macro level transitions without elaborating the social structural details through which this occurs…[it] allows taking such resources and showing the way they can be combined with other resources to produce different system-level behavior or, in other cases, different outcomes for individuals. (Coleman, 2000, p. 19)

Coleman suggests a number of forms of social capital. One is the existence of an understanding among social actors of the necessity to build trust - a willingness among all parties to meet expectations and obligations is critical. "If *A* does something for *B* and trusts *B* to reciprocate in the

future, this establishes an expectation in *A* and an obligation on the part of *B*.... This form of social capital depends on two elements: trustworthiness of the social environment, which means that obligations will be repaid, and the actual extent of obligations held (Coleman, 2000, p. 20)."

A second form of social capital is the existence of open, accessible, accurate and cost-effective information channels.

A third form is the existence of norms and effective sanctions for violating those norms (Coleman, 2000, pp. 22-23).

Components of the social structure that facilitate social capital formation include closure and appropriable social organization. Closure of social networks facilitates effective use of norms and sanctions. If one person in a community, for example, burns garbage in his/her backyard, against the wishes of all of his/her neighbors, it is far easier to sanction that person if all of his/her neighbors know each other well enough to come together and take a collective stand on the issue. (This assumes also that there is no legal ordinance against doing so, merely a long-standing norm among a community of neighbors).

If, however, none of the other neighbors know each other, they also suffer the consequences of the garbage burner's actions, yet it is far more difficult, if not impossible, to come together as a community in order to make a stand on the issue. Closure also facilitates trust among neighbors/community members (Coleman, pp. 23-25).

Appropriable social organization entails the ability of community groups that came together for one purpose to respond to newly arising needs of their community. An environmental group which initially formed to confront a developer or a corporate polluter may, once the initial issue is resolved, stay together to confront other environmental issues in their community, or simply to raise awareness about the fragile nature of the ecosystem in which they live (Coleman, pp. 25-27).

A central concern of the steward is passing the endowment of our natural heritage on to future generations. In reflecting on the implications of social capital theory for stewardship, it is therefore necessary to consider how it can aid in the development of young people. Social capital both within families and within communities contributes to a child's development.

"The social capital of the family is the relations between children and parents (and, when families include other members, relationships with them as well) (Coleman, 2000, p. 28)." Simply put, the ability and willingness of parents to spend time with their children, nurturing them and guiding them through the formal education process, makes a difference.

Children are also influenced by the social environment outside of the home. "The social capital that has value for a young person's development...can [also] be found...in the community consisting of the social relationships that exist

among parents, in the closure exhibited by the structure of relations, and in the parents' relations with the institutions of the community (Coleman, 2000, p. 31)."

Coleman's research on high school dropout rates among students from various family and community backgrounds, incorporating a number of related variables, provides persuasive evidence that the presence of social capital makes a difference in a child's development, as evidenced by the specific example of school achievement.

Fukuyama's analysis indicates that cultures that have evolved in ways that do not support the natural emergence of institutions of civil society also inhibit the growth of social capital. Trust, as an integral component necessary for the success of larger organizations/institutions, manifests itself through a healthy civil society. Countries that do not have these institutions tend to have a strong emphasis on the importance of family, but the trust inherent in a strong family structure does not extend beyond this. Large institutions can exist in such cultures, but they must be actively supported by the state and rely on hierarchical structure to work successfully.

One of the implications of this lack of intermediate institutions is that the state has much greater control over its citizens. While they may have the luxury of retreating into a solid, nurturing family environment, they may at the same time feel powerless, objects in the Freirean sense, incapable of changing structures and unaware of (or afraid of) their own capacity for agency. Because the institutions of civil society play such an important role in formation of social capital and

challenges to state power, it is difficult to imagine community environmental stewardship and/or community environmental activism existing without them.

Yet culture should never be thought of as essential and unchangeable. It is important to understand the role of relations among social actors in the formation of social capital, and the potential this has for changing macro-level structures. However, it is equally important to reflect on situations wherein longstanding cultural mores inhibit the formation of social capital at the micro, community level, and the potential role that institutions can play in improving these relations. "The task of building up social capital lies…in extending previously narrow expectations of mutual trust to produce more positive-sum outcomes for all. Engaging social capital is tantamount…to building up appropriate expectations (Krishna, 2000, p. 75)."

Krishna argues that in addition to relational capital, institutional capital is necessary to sustain social capital. "Institutional capital is structured. Rules and procedures exist to guide individuals' behavior, supervised by people acting out well-recognized roles. Relational Capital is more amorphous and also more diffuse (Krishna, 2000, p. 77)."

Yet the two must complement each other.

> Institutional Capital is, by itself, not easily fungible. Clear rules and procedures, devised to deal with one issue area, may serve little purpose when the group turns to deal with some other collective concern…If norms of diffused reciprocity are practiced in the community, then the process of working out new rules becomes so much easier. Institutional Capital works best, thus, when it goes side by side along with Relational Capital. (Krishna, 2000, p. 77)

Hence, opportunities for the formation of social capital exist in cases where institutional capital is weak, but relational capital is strong (as in a situation where a weak macro-economy and/or a corrupt national political regime exist, but small, dispersed communities have strong social ties and high levels of trust).

However, they also exist in cases where relational capital is weak but institutional capital is strong (as in a situation where there is much fighting and distrust between and within communities in a certain region of a country, but national-level institutions of a country are strong, effective, and trustworthy). "The act of enhancing flows from social capital depends…on attending – in addition to the cultural dimension – also to the structural dimension of social capital (Krishna, 2000, p. 76)."

Krishna's matrix provides a useful analytical tool for funders of development assistance, and by extension, environmental groups committed to promoting and fostering a stewardship ethic. If relational capital appears strong in a given context, but institutional capital is weak, priorities for funding can be clarified, and vice versa. In cases where both relational and institutional capital are weak (as in a nation steeped in economic depression or engaged in a civil war), outside development and/or reconstruction assistance may be necessary to assist the process of social capital formation (Krishna, 2000, p. 79).

The Global Civil Society. Increasingly, there is a sense that a global civil society has been emerging over the past two decades or so (Lipschutz & Mayer, 1996, p. 1). It is playing an ever-larger role in formulating alternative policy agendas, seeking and encouraging greater citizen participation, strategically

working for change domestically, regionally, and globally, and actively contributing to fundamental shifts in how societies view environmental issues.

Global civil society can be defined by a number of characteristics. First, it is transnational in nature. The use of transnational as opposed to international implies a multitude of non-state institutional actors and linkages. These institutions influence policy through dynamic alliances based on commonly shared interests[6], and are open to re-alignment as issues, over time, become re-prioritized.

Secondly, global civil society involves a complex set of knowledge-based linkages. Strategic, selective information sharing and use of information to influence policy debates has become central. With the advent and ever-growing use of the worldwide web, the potential for ongoing communication and collaboration is greater than ever before. One example of how this can work effectively is the "boomerang" effect. An NGO based in Kalimantan, Indonesia, fighting loss of rain forest may have no success in lobbying the national government. They may even feel intimidated by the potential response of the government. Through contacts with international NGOs, such as Greenpeace or World Wildlife Fund, they can describe the situation and/or invite observers to view the damage. Representatives of these international NGOs may then actively lobby their governments (U.S. and European governments) to put pressure on the Indonesian government to scale back its timber production. Thus, the institutions

[6] An important distinction should be made here between interests, as defined by issues, as opposed to interests which define issues (Heclo, as referenced in Keck and Sikkink, 1998, p. 32). Interests defined by issues, such as natural resource depletion, are value-based and principled. Issues defined by interests may be far more utilitarian, such as the definition of lack of open markets in a specific nation as an issue by a multinational lending institution or corporation (or, for example, members of Congress who support these institutions).

of global civil society have effectively subverted immovable state structures (description of Boomerang pattern of influence taken from Keck and Sikkink, 1998, p. 36).

Third, global civil society is sensitive to local differences. History, culture, and state structures all vary markedly from place to place, and all of these contextual factors will influence the workings of the institutions of civil society in that place. International NGOs must be sensitive to these differences and recognize that effective strategies in one place may not work at all in other settings, and may in fact be dangerous to people in these settings.

Fourth, the institutions of global civil society conceive of environmental crises as social phenomena rather than physical phenomena. While the net impacts of environmental damage and natural resource degradation are obviously physical, the causes are virtually always social. The policies of state governments, a culturally-valued economic system which stresses ever-expanding markets and denies the importance of environmental accounting, the use of highly intensive agricultural production and genetically altered seeds, increasing population leading to greater pressure on natural resources, are all social phenomena which contribute to environmental degradation (characteristics of global civil society taken from Lipschutz and Mayer, 1996, p. 51).

The institutions of global civil society may be divided into four types. First, there are organizations/alliances practicing at the international level or across national borders. Secondly, there are organizations that provide technical assistance to local groups engaged in resource restoration and the individual

groups themselves. Third, there are individual groups that belong to national or transnational alliances. Finally, groups and organizations "in touch" with their counterparts elsewhere around the world or are simply sharing an ecological epistemology (Lipschutz and Mayer, 1996, p. 51).

The activities these groups engage in include a) ecosystem management and restoration, b) fostering of localized environment/development projects, c) environmental education, and d) participation in national and transnational networks and alliances (Lipschutz and Mayer, 1996, pp. 57-60). Through the above modes of action, members of the global civil society are building a fund of transnational social capital and encouraging global stewardship in ways that have never before been possible.

Transnational Advocacy Networks. The emergence and influence of transnational advocacy networks, in particular, bears further examination. "Networks are forms of organization characterized by voluntary, reciprocal, and horizontal patterns of communication and exchange (Keck and Sikkink, 1998, p. 8)."

They have been described as a "third mode of economic organization" (as distinguished from markets and hierarchies/firms). They are "particularly apt for circumstances in which there is a need for efficient, reliable information…[and] for the exchange of commodities whose value is not easily measured (Powell, as quoted in Keck and Sikkink, 1998, p. 8)." These commodities might include information, sharing of experience, and strategy formulation, among others.

Advocacy networks "are organized to promote causes, principled ideas, and norms, and they often involve individuals advocating policy changes that cannot be easily linked to a rationalist understanding of their 'interests' (Keck and Sikkink, 1998, pp. 8-9)."

Advocacy networks, in their efforts to influence governments and/or the international community, use four types of tactics. These include information politics, symbolic politics, leverage politics, and accountability politics. Use of information politics requires the ability to generate quickly and accurately information highlighting an issue. Generating good information is not enough, however. It then needs to be disseminated strategically in ways that it will have the greatest impact.

Symbolic politics also relies on information, but does not concern itself with accuracy of facts and figures. Rather, it seeks symbolic images or stories that might bring an issue home to large numbers of people in ways that other information can't. Photos of migratory birds drenched in oil after the Exxon Valdez oil spill conveyed a message that a mere number, 11 million barrels of oil, could not.

Leverage politics includes material and moral leverage. Transnational advocacy networks can convince multilateral donors and lenders to tie approval of new aid and/or loans to specific nations to a promise for greater enforcement of environmental protection statutes. This is an example of material leverage. A government that is considering a relaxation of laws prohibiting dumping of toxic waste into rivers and streams might reconsider if they are aware that they will be

exposed to the international community as polluters. Simply put, they do not want to look bad. This is an example of moral leverage.

Finally, accountability politics assures, if a government has previously signed on to an international environmental treaty, that it will live up to its stated commitment in practice. This is similar to moral leverage. However, there is an additional embarrassment factor as a nation has the potential of being caught red handed not living up to its commitment (four types of tactics taken from Keck and Sikkink, 1998, pp. 16-25).

The stages of influence of transnational advocacy networks may be seen as fivefold. These include "1) issue creation[7] and agenda setting; 2) influence on discursive positions of states and international organizations; 3) influence on institutional procedures; 4) influence on policy change in 'target actors' [including states, international organizations, or private actors]; and 5) influence on state behavior (Keck and Sikkink, 1998, p. 25)."

Factors Influencing Individual Empowerment. In their book, *The environmental crusaders*, Glazer and Glazer sought to understand the dynamics leading to individual empowerment to engage in environmental activism. They found that, on an individual level, people become empowered when a number of factors are in place. First, they are able to draw from a "reservoir of social capital." Over the years, people in a community may have developed a strong shared sense of values and an ability to care for one another. When the need to

[7] This does not refer so much to creating an issue where none previously existed as to framing pre-existing issues in ways that have the greatest potential to influence policy and the behavior of state actors. Saving the rainforest might be framed as much by an argument about indigenous peoples' rights as it would be about protecting biodiversity. By the same token, an argument about protecting biodiversity may hold no weight if it is not tied to, for example, finding a cure for cancer. *(Note: This footnote was not originally part of the above quote.)*

organize around an environmental issue arises, this reservoir of social capital can be drawn from.

Second, there is a strong sense that grassroots organizing and action can be effective in combating polluters and addressing other environmental issues.

Third, individuals who wish to become involved as stewards must be willing to learn as much about an issue as they can. They must be able to articulate facts in policy forums and public debates, and, when necessary, form alliances with sympathetic technical experts when there is simply too much to learn about an issue and not enough time.

Fourth, individuals must overcome fear. This is not so much a fear of the threat of actual physical violence, which may only be a possibility under the most repressive of circumstances, but fear of chastisement by affected interest groups (such as private sector companies), and/or fear of alienating friends and neighbors through one's activities. Often, it also means overcoming fear of one's own perceived inadequacy to effectively address environmental issues and to make a difference. Additionally, there is the realization that one's life, all other things being equal, will never be the same again because of the time and energy commitments that are sure to be required for sustained involvement.

Finally, in many cases, individuals are empowered to act through a concern for future generations. It is remarkable to learn how many prominent environmental activists started out as "ordinary" mothers who began thinking about the potentially negative impact of environmental problems in their

communities on their children (factors influencing individual empowerment taken from Glazer and Glazer, 1998, pp. 168-182).

Much of the above suggests that civil society, networking, and the accumulation of social capital has largely positive impacts on democratic governance and in countering institutional structures which have overexploited the natural world. However, it is also worth sounding a cautionary note here.

> Social inequalities may be embedded in social capital. Norms and networks that serve some groups may obstruct others, particularly if the norms are discriminatory or the networks socially segregated. Recognizing the importance of social capital in sustaining community life does not exempt us from the need to worry about how that community is defined – who is inside and thus benefits from social capital, and who is outside and does not. Some forms of social capital can impair individual liberties, as critics of communitarianism warn (Putnam, 1993, p. 42).

Examples of this kind of negative social capital abound. Traditional kinship structures and village-level forms of government wherein women are systematically discriminated against; religious or church-based community groups wherein gays and lesbians are unwelcome or are forced to remain silent about their sexual identity; otherwise progressive environmental groups that don't value the voices of minorities. All of these scenarios must give us pause to reflect upon and to analyze critically existing forms of social capital in a given context, which may be far less ideal than they initially appear.

In conclusion, the existence of social capital at both the micro- and the macro-level are necessary for all forms of community development, and this certainly includes environmental activism and stewardship. Pre-existing

relational forms of social capital can aid in the strengthening of institutional capital and vice versa, but in cases where both are weak or nonexistent, outside assistance may be necessary. Institutions of civil society provide important avenues for social capital formation, either to complement trustworthy government institutions or to counter negative influences of corrupt bureaucracies.

Civil society has increasingly become a global phenomenon, and with the advent of the Internet, inexpensive, effective global networks have been formed. These networks can influence national governments in ways that locally based institutions of civil society cannot, creating new forms of trust and greater potential for social change. Individuals choose and feel empowered to get involved when they can draw from a reservoir of social capital, believe in the efficacy of grassroots action, are willing to learn on an ongoing basis, can overcome their fear, and are guided by a concern for future generations.

Consideration of the nature of civil society and its interdependence with social capital, the potential for effective use of the networks of global civil society, and the conditions allowing for individual participation are all important for those seeking to foster an ethic of stewardship.

Implications of Adult Learning Theory for Creating a Stewardship Ethic

As implied above, for a healthy, thriving democracy to exist, an active civil society must immerse itself in addressing social issues which affect the lives of community members and which have the potential to have an impact on the lives of future generations. A solid fund of social capital must have been formed,

perhaps over several generations, for trust to exist among actors in the civil society. To foster and sustain the kind of land or stewardship ethic that Aldo Leopold proposed over a half century ago, education must play a pivotal role.

Certainly, environmental issues are being taught in the public school system in the U.S. to the current generation of K-12 students. For example, in Massachusetts, the Social Studies curriculum frameworks provide criteria for teaching about the environment, as do the Science frameworks.

There are even encouraging indications that environmental stewardship is being systematically taught to K-12 students (see below). Whether or not existing efforts will be enough to fundamentally change consumption patterns and the relationship of future generations to the Earth, especially in a market economy, remains to be seen.

It is possible that the vast majority of today's K-12 students will grow up to be environmentally conscious stewards who will collectively work towards a new, less destructive production and consumption paradigm. However, there is much that needs also to be done to foster a stewardship ethic among the current generation of working age and retired adults. As we have seen, the path to stewardship and/or activism is chosen out of, among other reasons, a concern for one's children and for other members of one's community.

Yet, as Glazer and Glazer's analysis indicates, for nonscientists who have been out of the formal education system for a number of years, it is fraught with obstacles. One's knowledge and authority to speak on certain issues may come under fire by a range of "experts" with different agendas. Also, one may need to

overcome a significant fear of new learning, as well as a sense that the issues are so overwhelming that they are beyond the ability of any one person to address.

While there is clearly no easy answer to these challenges, there is much from adult learning theory that can inform the design of curriculum for community members wanting to get involved in local environmental initiatives. The following paragraphs will attempt to highlight some of the most pertinent ideas from this vast field.

As early as the 1920s, Eduard Lindeman espoused a philosophy of adult education that would act "as a mode of social adaptation that would assist adults 'to learn how to make important choices reflecting the issues they are obliged to confront.' (Lindeman, as quoted in Brookfield, 1987, p. 15)." Right away, then, we see an emphasis on something other than content learning and much more akin to placing priority on the building of social capital and civic involvement through adult education. "Adult education served as a catalyst to collective enterprise by revealing the nature of the social process, by replacing destructively warring interests with creative conflict, and by 'making the collective life an education experience.' (Lindeman, as quoted in Brookfield, 1987, p. 17)."

For Lindeman, and for many adult educators to this day, adult education cannot be divorced from collective social purposes. "Adult education will become an agency of progress if its short-term goal of self-improvement can be made compatible with a long-term, experimental but resolute policy of changing the social order (Lindeman, as cited in Brookfield, 1987, p. 19)."

More forceful statements of this fusion of democracy building came in the 1930s, at the height of the great depression. Lindeman declared at that time that "adult learning *is* learning associated with social purposes" (emphasis added) and "the complete objective of adult education is to synchronize the democratic and the learning processes (both quotes cited in Brookfield, 1987, p. 19)."

The work of Antonio Gramsci and the notion of counter-hegemony emerged at about the same time, yet in dramatically different contexts. During the period in Italy between the two World Wars and Mussolini's rise to power, Gramsci's activism and writings, while not directly addressing education, may be seen as having had enormous impact on adult education practice.

Gramsci argued that a "war of position" was necessary to counter the oppressive tendencies of governments. This counter-hegemonic activity should occur not through direct confrontation with government institutions, but through the institutions of civil society, since these were seen as being supported by governments, or at the very least tolerated by governments. By attempting, through these institutions of civil society, to reach consensus on the need for social transformation around certain issues, a "historical bloc" could be formed (Mayo, 1999, p. 38).

Groups that form around environmental issues, wherein they directly oppose corporate policies, supported by governments (such as polluting rivers or groundwater), may be seen as counter-hegemonic. To the extent that they learn from each other through discussion of and consensus-building around these issues, organize training workshops to build their technical knowledge, or seek

allies in government or more established NGOs to assist them in their learning processes, they are engaging in various forms of formal and non-formal adult education. In the case of raising consciousness about stewardship, their activities may be seen as counter-hegemonic in that they are working towards a new ethic, the land ethic of Aldo Leopold.

Michael Welton sees true adult education as inseparable from and contributing to a healthy civil society, which in turn is the key to a healthy democracy.

> I would like to argue that the core value structure of socially responsible adult education – the affirmation that the life world is the foundation of meaning, solidarity, and stable personality; the centrality of social learning processes to the formation of the active citizen; and the fostering of discussion, debate and dialogue amongst citizens – is compatible with 'discursive' or 'deliberative' approaches to democracy. And 'civil society' – the realm of communicative action and self-organization – is the key to understanding the meaning of deliberative democracy. (Welton, 1997, p. 28)

This means, in part, the ability for the institutions of civil society to determine and pursue their own learning agendas (Welton, 1997, p. 32). This has implications for groups forming around pressing environmental issues in their communities, or around a shared sense of stewardship. There may be an important role for an adult education facilitator working with newly organized groups that are struggling with formulating an agenda for addressing issues of concern and for ongoing learning of group members.

Individual Learning Styles. This implies that there must simultaneously be an effort to focus on individual learning needs. If people are not ready to enter formal learning situations to increase their knowledge, there must be other

avenues available to them, and the adult educator must determine ways to make these avenues easily accessible to them.

> ...education is a form of human exchange, which, if it is to be effective, requires participants to be creative partners acting individually or collectively in different circumstances and according to the interests which lead them to look for relevant learning...we have to take seriously evidence that people who do not take up formal...courses because they lack confidence or motivation, can begin learning through other kinds of activities and then move on to formal learning. These are activities they undertake as people, as citizens, as members of civil society...(Jackson, 1997, p. 54).

Distinct learning styles, life experiences, and viewpoints must be considered by the designers and providers of adult education. All of these have in turn been formed in the adult learner on the foundation of differing social, economic, cultural, and/or political backgrounds.

A starting point for an exploration and understanding of differing learning styles is Kolb's discussion of four learning styles, which include a) active learners, b) reflective learners, c) theorising learners, and d) experimental learners. Active learners "like short-term goals and are usually bored by the slower work of implementing and consolidating a programme." Reflective learners, "before making a decision...try to think through all the implications, both for themselves and for others [and]...tend to like sharing their learning with others because this helps them to collect different opinions before they make up their minds." Theorising learners "try to make coherent pictures out of complex material...they try to be objective, detached; they are less sympathetic to human feelings, to other people's subjective judgements." Experiential learners "tend to be confident, energetic, impatient of what they see as too much talk. They like

solving problems [and]...being shown how to do something but become frustrated if they are not allowed to do it for themselves very quickly (quotes taken from Rogers, 1996, p. 111, as adapted from Kolb, 1976 and 1984 and Honey and Mumford, 1986)".

Numerous learning style inventories and personality type indicator tests have been devised over the years, all of which are subject to ongoing challenge and revision. Nonetheless, they serve as useful, if imperfect and incomplete, frameworks for beginning to acknowledge the differences among individual learners.

The Experiential Learning Cycle. Also central to the design of adult curricula is the consideration of the experiential learning cycle. Traditionally, this has been represented as concrete experience, leading to critical reflection on this experience, leading to action informed by the critical reflection on the previous concrete experience. This action then leads to further critical reflection on the most recent experience/action, presumably leading to an ongoing, upward spiral of ever increasing effectiveness and efficiency in one's actions.

Rogers has argued that there are a number of ways in which this can and should be modified to provide a more comprehensive, realistic framework for teachers of adults to consider. First, the stage of critical reflection on experience concurrently includes a search for new knowledge and experience. This "involves making a judgement on experience, assessing it in the light of some other standard which is drawn from other experience, either one's own or other people's

experience...there is the active search for new material against which experience can be judged (Rogers, 1996, pp. 107-108)."

Second, this process leads not directly to action, per se, but to abstract conceptualization, or hypothesis formation. The testing of these newly formed conceptualizations or hypotheses may be seen, rather than merely as action, as active experimentation.

Finally, throughout this process, there will be points at which decisions must be made. For example, one may be considering a number of abstract conceptualizations to frame one's critical reflection on experience, but it is necessary to settle on one to inform one's action.

Hence, Rogers' learning cycle goes from a) concrete experience to b) critical reflection on experience incorporating a search for and selection of new knowledge and experience, leading to c) abstract conceptualization followed by d) active experimentation and finally returning to e) further critical reflection. Along the way, the decision-making process must be considered part of the experiential learning cycle (Rogers, 1996, pp. 107-110).

Consideration of this learning cycle is important for teachers of adults, whether the subject matter is watershed management, research methods, data collection techniques, or community leadership. The teacher/facilitator must assure that adult learners have a chance to draw on content and/or skill learning to inform action, and to reflect on their action in the manner described above before learning additional content/skills and taking further action.

Meaning Perspective Transformation. In the context of stewardship education, there is an opportunity for perspective transformation through this action-reflection-action process. As formulated by Mezirow and described by Tennant, this is achieved through a process by which one gains "the ability to take the perspective of others, analyze one's context, think abstractly, be critically reflective, and be more self-aware and capable of integrating logic and feelings (Tennant, 1993, p. 34)." Meaning perspective transformation is to be distinguished from meaning scheme transformation. Meaning scheme transformation may be understood as normative changes in one's life, such as when one goes through college, gets a degree, and gets a job.

While these imply significant changes in one's day to day activities, as well as gaining an ever-expanding base of knowledge and experience, which in a sense is transformative, it does not entail a fundamental shift in one's belief system. Meaning perspective transformation leads to a radical change in one's worldview brought about through critique and rejection of a previously accepted set of social beliefs. (Tennant, 1993, p. 39). Engagement in stewardship and/or environmental activism certainly has the potential to contribute to meaning perspective transformation of involved individuals.

In the context of community environmental stewardship, examples of meaning perspective transformation may be drawn from a recent case study of Friends of the Land of Keweenaw (FOLK), a Michigan-based community environmental group. For Bob Darling, former President and current Vice

President of the group, the process has enabled him to seek out those holding views opposed to his, to respect those views, and to always seek common ground.

> I think prior to this I would've been more inclined to be comfortable with the people who share my point of view. So, it has made me much more outgoing in seeking people who don't share my point of view. And from the perspective of respecting what it is they have to say. You know, and keeping an open mind, because nobody has a monopoly on truth. There are, you know, it isn't that, people that don't agree with us aren't evil people, with evil thoughts or anything like that, and sometimes they do have a valid point. I think it's been one of the positives about our group is that we're willing to look at that, and acknowledge those things (quoted in DeMoranville, 2000b, p. 32).

For Mike Donofrio, a fisheries biologist and FOLK's newsletter editor, it has enabled him to see beyond what he describes as his narrow formal training as a scientist.

> It's focused, you know, been instrumental in my life in bringing about a greater, much greater awareness on environmental issues. That's kind of the long and short of it, you know, is that, without that group, I would've continued to kind of live more in a shell-like environment, you know, and it kind of has forced me to think not only on a regional basis, but on a world-wide basis. What's going on and how these problems are reaching our area (quoted in DeMoranville, 2000b, p 33).

Context and Positionality. In addition to consideration of social change goals or individual learning goals, there is a need for adult educators to understand as much about the context in which the learning is occurring as possible. Are the learners there because they want to be or because they are required to be? In what age range are the majority of the learners? Are they coming from "professional" backgrounds, implying several years of higher education, or from "labor" backgrounds, implying no more than a high school diploma and by association, perhaps, a dislike of traditional classroom settings

and learning formats? Are they from non-Western cultural backgrounds and, if so, what does this imply for setting and achieving learning goals and for out of classroom assignments?

A discussion and exploration of positionality of both participants and facilitator may be appropriate as a means to break down barriers between participants. To

> create activities that will help participants explore the *connection between* who they are as individuals and the structural systems of privilege and oppression (such as gender, race, and class) that partially inform how they think, how they teach and learn or construct knowledge on an individual level, and inform what is constructed as the "canon" or "official knowledge base" of a particular field (Tisdell, 1998, p. 139).

A discussion of positionality may also be valuable in the case of a newly formed environmental activist or stewardship group. Are they the victims of environmental racism? Have they always subconsciously thought of themselves as *objects* of history, in the Freirian sense, and has this attitude prevented them from ongoing learning and/or coming to an understanding of their own sense of agency?

Finally, it is worth sounding a note of caution about the goals of adult education. The trend over the past decade or so has been to discuss adult education and training as if they were one and the same (Walters, 1997, p. 8). There is a danger inherent in this. While adult educators will always meet a legitimate need through training designed to build technical knowledge and skills, this should never be undertaken at the expense of working towards societal transformation.

While paradigm shifts will always be a slow, dialectic process, they must, to some extent, be consciously considered when designing curriculum/learning opportunities. The goal of a three hour technical training on water quality monitoring for community members should not be merely a how-to session, but also an opportunity to discuss the notion of a stewardship ethic as a guide for people's actions.

In conclusion, there is an important potential role for adult education in fostering a community ethic of stewardship. Adult education takes many forms, and it can and should be as much about encouraging participation in the democratic process and working collectively for social change as it is about transfer of knowledge and technical skills. The adult educator can best facilitate the engagement of adult learners through a careful consideration of their individual learning styles, the experiential learning cycle, and the positionality of the learners.

Adult education which holistically considers the individual learner's needs and encourages active participation in the institutions of civil society has the potential to lead to meaning perspective transformations in learners, or profound shifts in the way they view the world, as a result of action and critical reflection.

Adult education, then, has the potential to contribute to the growth and effectiveness of civil society, which in turn has the potential to be a highly effective avenue for promoting the stewardship ethic.

A Brief Note on Recent Trends

It is encouraging to see that the stewardship concept is finding its way into two distinct areas of American life – the K-12 formal school system and the private sector.

Stewardship education targeting K-12 students has been legitimated through a number of formal programs that directly work with schools. On the Audubon Society's webpage (www.audubon.org), for example, one can click to "Earth Stewards". This is a nationwide program that is

> an award-winning environmental education collaboration among the National Audubon Society, the U.S. Fish and Wildlife Service, the National Fish and Wildlife Foundation, schools, local organizations, other governmental agencies, and businesses. Earth Stewards involves students, teachers, and other community members in the study of a local ecosystem, empowering them to become stewards of fish and wildlife habitats…[developing] a multidisciplinary curriculum that is issue-based and community-based. (NAS webpage)

In studying a local ecosystem and specific habitats within that ecosystem, from the perspective of various disciplines, including art, music, social studies, and English, students can establish meaningful connections between their lives and interests and the natural world. The program is more than an opportunity for students to learn *about* their local ecosystem. They become engaged in stewardship initiatives, such as wetland restoration, tree planting for erosion control, stream cleanup, stream bank revegetation, and soil erosion containment (NAS webpage).

On the UMass campus, an environmental stewardship education program also works towards raising awareness of Commonwealth K-12 students and teachers by engaging them in a variety of stewardship initiatives.

> The UMass 4HYFD Environmental Stewardship program empowers young people and their adult partners with the knowledge, skills, and values to care for and effect positive changes in their human and natural communities. The program integrates youth development and environmental science and uses experiential learning methods to connect environmental sustainability to everyday life in diverse communities across Massachusetts (UMass Extension webpage).

This program sponsors an annual conference, Earth Connections, which brings groups of students and teachers from throughout Massachusetts to participate in interactive presentations/learning opportunities on environmental issues. In addition, they have published curricula designed for K-12 schools on watershed stewardship, containing "300+ pages of tried and tested activities for grades 4-12 incorporating inquiry, problem-solving and use of models...for school-based educators and leaders of youth organizations (UMass Extension webpage)."

Private Sector Initiatives. Finally, stewardship has increasingly been embraced, both conceptually and in terms of measurable sustainability goals, by the private sector. Peter Block calls for stewardship to replace leadership in the private sector. Leadership focuses on certain individuals at the expense of other individuals. If certain employees are expected to respond to the leadership of others, they are left unempowered and will remain in a reactive mode in the workplace.

> [Stewardship] is concerned with creating a way of governing ourselves that creates a strong sense of ownership and responsibility for outcomes...creating self-reliance on the part of all who are touched by the institution....Stewardship begins with the willingness to be accountable for some larger body than ourselves – an organization, a community. Stewardship springs from a set of beliefs about reforming organizations that affirms our choice for service over the pursuit of self-interest....It requires a level of trust that we are not used to holding (Block, 1993, pp. 5-6).

This framework for creating a sense of stewardship in the private sector among all who work for an organization is encouraging but has its limits. First, it is difficult to imagine a firm wherein the "level of trust" among all employees could actually exist or be sustained over time.

Second, even if all employees embraced the stewardship concept in a firm, hierarchies of salary, formal education, and valued expertise would continue to exist, with the inherent potential to alienate those at the "bottom" of the organization.

Third, this notion of stewardship would appear to define community first and foremost in terms of loyalty and accountability to one's workplace. Competition inherent in market economies would still exist between firms; stewardship implies concern for all members of a community, even those who are working for "competitors". Also, it is unclear how such a notion of stewardship would lead to active engagement, among employees of specific firms, in the work of institutions of civil society in their communities.

On a level more directly linked to sustainable use of natural resources, the private sector has also begun to embrace the stewardship concept in measurable ways. This has happened for very pragmatic reasons, such as "fear of lawsuits,

the chance to net higher profits by selling environmental clean-up services to other corporations, the opportunity to save money;...the resulting competitive advantage; and avoiding 'green consumers' who could call for boycotts or other undesirable actions (Guimaraes and Liska, 1995, p. 10, citing Kleiner, 1990)."

Yet there is also a sense that even top executives want their children to inherit a cleaner world, in which sustainable forms of economic activity are more prevalent than they are today. An Arlington, Virginia-based organization called the Management Institute for Environment and Business (MEB) has suggested that corporate environmental strategies fall into three categories, 1) the environmentally responsible citizen, 2) the economically rational environmentalist, and 3) the environmental steward. The first "includes firms who commit to compliance with existing regulations, are reactive and view 'green' as being politically smart (Guimaraes and Liska, 1995, p. 12)." This approach has been viewed by environmental activists as self-serving and insincere, but is still prevalent today.

The second "is characterized by firms who take environmental action beyond regulations, but only when it pays to do so (Guimaraes and Liska, 1995, p. 12)." This may also be seen as a self-serving approach; a firm will initiate a recycling or packaging-reduction program if *they* save money. They will financially support environmental education or community initiatives if *they* receive positive publicity for doing so.

Finally, there is the category of environmental stewards, which "is characterized by firms who take environmental action based on a set of values and

consistently go beyond regulations (Guimaraes and Liska, 1995, p. 12)." Importantly, this group is seen as making environmental responsibility a priority at least as important as financial profitability, and as tending to have a guiding vision that sets its sites beyond the next quarter or the next annual report. They often go beyond what is required by law or economic rationality.

An environmental stewardship approach to business is seen as having benefits in three broad categories. The first of these is management and personnel benefits (i.e., improving employee morale, fostering a more positive organizational culture, stimulating innovation, creating employee training opportunities, contributing to problem-solving skills, lower employee absenteeism and turnover, etc.). Second is operational efficiency benefits (i.e., helping to avoid lawsuits, achieving greater energy efficiency, generating less material waste, etc.). Third is external benefits derived (i.e., increasing sales, strengthening company's image, improving customer loyalty, etc.) (Guimaraes and Liska, 1995, pp. 12-13).

The single greatest disadvantage to embracing stewardship is that firms will inevitably spend more money on meeting stewardship goals than their competitors who merely comply with existing laws (Guimaraes and Liska, 1995, p. 13). The MEB has developed a 21-item, weighted instrument for measuring levels of corporate stewardship among firms. This includes items such as "Considers environmental regulation and expense", "willingly repackages products to be 'green'", "has developed an organization-wide recycling program", "consistently goes beyond what regulations require", and "makes environmental

responsibility a priority at least equivalent to financial profitability (Guimaraes and Liska, 1995, p. 14)."

A more grounded example can be found in the packaging stewardship movement. Traditionally, corporations have not been held responsible for how or with what materials they package their products. Federal governments have overseen broad environmental protection legislation, and local communities have provided waste disposal sites and facilities (Fenton and Sinclair, 1996, p. 508). In both Germany and Canada, legislation was passed creating packaging stewardship programs. The goal of this legislation has been to increase the responsibility of corporations for how they package their products, and create stronger partnerships for stewardship between these corporations and local municipalities.

Specifically, packaging stewardship is defined, in this case by the National Packaging Task Force of the Canadian Council of Ministers of the Environment, as the "principle by which industries assume responsibility for the environmental impacts caused by the packaging that they introduce to the marketplace...meaning that industries, not municipal governments, must be the ones to keep it [waste] out of dumps and incinerators (Ryan, as quoted in Fenton and Sinclair, 1996, p. 509)."

The Canadian Industry Packaging Stewardship Initiative (CIPSI) called for "all who are responsible for introducing packaging to the marketplace [to] take action to divert packaging from disposal, through reuse and recycling (CIPSI, as quoted in Fenton and Sinclair, 1996, p. 509)."

The Canadian National Packaging Task Force also identified a set of 13 principles to guide packaging stewardship initiatives. Among these are "packaging stewardship initiatives should ensure that packaging has a minimal effect on the environment", "...should strive for national consistency, balanced with flexibility to respond to regional differences", "...includes a responsibility for monitoring, evaluation and education", and "...extends beyond national borders (Fenton & Sinclair, 1996, p. 510)."

The German approach "is to close the product's life-cycle by making producers responsible for their products from cradle to grave (Michaelis, 1995, p. 232)." Anecdotal evidence that this has begun to happen in the U.S. can be seen, within only the past two years, by observing the increasing numbers of packaging materials carrying the recycling logo, from cardboard boxes to plastic bags.

While legislated stewardship initiatives are praiseworthy and impressive in what they are trying to accomplish, it is nevertheless unfortunate that they had to be legislated in the first place. Still, it is encouraging that certain legislators, in position to make a difference, saw wasteful packaging as an issue that needed to be addressed and approached the writing of legislation from a stewardship perspective.

In the end, however, because of the profit motive inherent in all private sector activity, the best way to convince firms to voluntarily adopt a stewardship philosophy may be through presenting evidence (as in the categories described above) of tangible benefits from doing so. Alternatively, added costs could be introduced for not doing so.

In conclusion, stewardship initiatives exist in a number of contexts other than the work of environmental groups. In the K-12 formal education system, the private sector, and the waste management industry, important notions of stewardship are being taught, promoted, and advocated. As population continues to grow worldwide, resources continue to be depleted, and other environmental problems persist unabated, it is encouraging to see a wider understanding of stewardship beginning to occur.

Implications of the Literature for the Study

The literatures of environmental stewardship, civil society, social capital, and adult learning theory all have direct relevance and application to the line of inquiry this study will explore.

The literature on the meaning and evolution of environmental stewardship informs our understanding of the three community-based environmental stewardship organizations included in the study. All of these groups define themselves, directly or indirectly, as environmental stewardship groups, and their missions and stated goals are widely shared by individual members interviewed for this study. This commonly shared understanding of stewardship, it may be argued, has the potential to influence the nature of individual involvement and ongoing learning.

The literature on civil society informs our understanding of individual involvement, especially as it provides an understanding of the potential that institutions of civil society have to influence government policy. As will be seen, individual engagement in the work of community-based environmental

stewardship groups, which are members of civil society, has the potential to complement or contest the actions of local, state, and federal government.

The literature on social capital informs our understanding of the importance of building and sustaining positive working relationships with other community-based organizations, government agencies, the private sector, and the citizenry. An absence of such relationships, or the existence of strained or adversarial relationships, are likely to significantly diminish the effectiveness of community-based environmental stewardship groups.

The literature on adult learning theory informs our understanding of the diverse ways in which adult community members, eager to engage in and contribute to the work of community-based environmental stewardship groups, pursue ongoing learning towards increasing their effectiveness as advocates on behalf of a resource base.

The patterns and processes of initial and sustained individual involvement, ongoing learning, and meaning perspective transformation, named and interpreted in Chapter Six, and the patterns and processes of community building and group dynamics, named and interpreted in Chapter Seven, are therefore grounded in the ideas and concepts of these literatures, as they have been examined in Chapters Two and Three.

CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

Design

Overall Approach. The overall approach for this study was a three-stage process (see Table One), falling within the qualitative paradigm. A qualitative study "is defined as an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting (Creswell, 1994, pp. 1-2)."

STAGE	METHOD	FEATURES
One	Organizational Profiles	Collection of data from brochures, internal documents, interviews, newsletters, and web site information
Two	Short Interviews	Tightly structured, thirty minute (approximately) phone interviews following an interview protocol, taped and transcribed
Three	Longer Interviews	Loosely structured, open ended, face to face interviews, taped and transcribed

Table 1: Stages of Data Collection

In the first stage, written documents were collected on the organizations from which interview samples were chosen. Sources included annual reports, prospectuses, newspaper and/or journal articles, and web-page information. This data was synthesized for each organization to tell its story, including history, mission, goals, and key accomplishments.

The second stage consisted of telephone and/or in-person interviews with 10 individuals per organization (Note: Only two were conducted in-person, at the

request of the participants). While these sought to answer the grand tour and sub-questions, the wording of interview protocol questions was somewhat different (see Appendix). The reason for this is that the grand tour and sub-questions were written first and foremost to guide the researcher's *line* of inquiry; they were not meant to be repeated verbatim. It was thought that the potential existed for interview participants to find them unwieldy and confusing. The questions on the interview protocol were designed with participants in mind.

While these questions were open-ended, an effort was made to limit interviewees' time to answer each question (20-30 minutes total per interview). This format enabled interviewees to respond to questions succinctly and allowed for more efficient data categorization and analysis during this stage. It is again worth noting that a few interviews exceeded this 30-minute limit.

The third stage consisted of qualitative, in-depth interviews with a much smaller sample (three interviewees per organization). Participants in this phase were selected based on their answers to questions posed in the second phase. Criteria included richness of selected responses and potential of these responses to inform curriculum design.

Richness of selected responses included, for example, lessons learned from their involvement, transformative moments they experienced, or intriguing challenges they faced along the way. Potential of responses to inform curriculum design included specific suggestions offered for training opportunities, effective teaching methods and/or activities that they have experienced, or areas that they

have come to understand are important but for which they are still lacking formal knowledge or training.

These interviews took the form of more open conversations. Loosely, they were organized around three central focal points. First, participants were asked to describe, in as much detail as possible, the origins and evolution of their environmental consciousness. This frequently led to follow-up questions and veered in different directions.

Secondly, participants were asked to expand on or clarify intriguing comments that they had made in the first interview. Additionally, they may have been asked to comment on patterns that the researcher saw emerging from an initial review of the first interviews (such as patterns of group dynamics).

While the researcher in some cases attempted to get more in-depth answers to the questions posed in the phase two instrument, there was much more flexibility allowed – the telling of personal stories was encouraged, for example. The goal of allowing participants to tell such stories and go in different directions with their responses was that more detailed answers to phase two questions would emerge, and that patterns would be either reinforced or reshaped through this additional data.

Finally, second interview participants were asked to comment on the single most important thing that they had learned from their stewardship work. Each of these interviews lasted approximately 90 minutes.

It is also important to note that second interviews, unlike the majority of the first interviews, were conducted face to face, in locations as diverse as

people's offices, living rooms or kitchens, coffee shops, in a private greenhouse, and by the banks of a river at a state-owned fishing area. The intent was, through personal contact, to reduce any potential reservations participants might have about fully sharing their stories with the researcher.

Rationale

The rationale for this design was an interest in learning, in detail, of the individual stories of community members who have become stewards. More importantly, through the study's approach to data collection and analysis, common patterns emerging from participant responses to interview questions were sought.

One of the assumptions of the qualitative research paradigm is that it is a process of inductive inquiry. "Categories emerge from informants, rather than are identified ***a priori*** by the researcher. This emergence provides rich 'context-bound' information leading to patterns or theories that help explain a phenomenon (Creswell, 1994, p. 7)." The intent of the research design is to "discover regularities (Tesch, 1990, as cited in Creswell, 1994, p. 146)."

Neuman offers further support for the idea of patterns emerging from qualitative data collection and analysis, describing a specific concept called pattern theory.

> Pattern theory does not emphasize logical deductive reasoning. Like causal theory, it contains an interconnected set of concepts and relationships, but it does not require causal statements.... Pattern theories are systems of ideas that inform. The concepts and relations within them form a mutually reinforcing, closed system. They specify a sequence of phases or link parts to a whole (Neuman, 1991, as cited in Creswell, 1994, p. 94).

Site/Population Selection and Sample Size

Site/Population Selection. Three organizations were selected for this study. These included the Housatonic River Initiative, based in Pittsfield, Massachusetts, the Wood Pawcatuck Watershed Association, based in Hope Valley, Rhode Island, and the Salt Ponds Coalition, based in Westerly, Rhode Island.

Each of these organizations is based in southern New England and has formed around stewardship of a particular regional ecosystem. While they all may be viewed as advocates in their efforts at conservation, their approaches inevitably vary based on the nature and urgency of the issues they are addressing.

Interview subjects were selected from a mix of volunteers, board members, and executive officers. The most important criterion was length of involvement (one-year minimum).

Beyond this, the most important criteria for selection of interview subjects for the Phase Two interviews were willingness and availability. The organizations selected for this study are relatively small, locally based, largely voluntary organizations. Hence, an active, core membership of highly engaged individuals is fairly limited in terms of size.

This approach to subject selection was consistent with the qualitative paradigm's tendency towards purposeful, nonrandom sampling. "The idea of qualitative research is to **purposefully** select informants (or documents or visual material) that will best answer the research question. No attempt is made to randomly select informants (Creswell, 1994, p. 148)." The educational and

professional backgrounds of the thirty participants are displayed on the following page.

More purposeful still was the selection of interview subjects for Phase Three interviewing. Three participants were selected from each group based on their responses to interview questions in Phase Two. By allowing for a greater timeframe for these interviews, as well as a more flexible approach to interview questions, responses were sought that would support and/or contribute additional insights to be incorporated into emerging patterns that the study describes.

Sample Size. Phase Two included thirty interview subjects, ten from each organization. Phase Three included nine interview subjects, three from each organization. Phase Three participants were all drawn from the Phase Two sample.

Twenty percent of HRI interview subjects in the Phase Two sample were women, and forty percent of interview subjects, in both SPC and WPWA, in the Phase Two sample were women. Two of the nine Phase Three interview subjects were women.

Trustworthiness

As Rossman and Rallis note in *Learning from the field*:

> Our position is that appropriate standards [for judging the value of a research project] depend on the assumptions you make about inquiry and how consistently these assumptions are played out in the project. This determines the *integrity* of the project – its wholeness and its coherence. Integrity, however, also implies *soundness of moral principle* – the ethical dimension that constitutes the second element of trustworthiness (Rossman & Rallis, 1998, p. 43).

One of the assumptions in undertaking this study was that the procedures and methods outlined above, if followed consistently throughout the study, would bring rich, useful data to light. Further, the procedure and methods undertaken in this study are believed to be the best way to build a pattern capable of answering the grand tour and sub-questions outlined. It has therefore been the intent of this research to follow this procedure consistently throughout the study, a consistency which it is believed strengthens its integrity.

This research, it should be argued, has also been guided by soundness of moral principle, from both a content as well as a methodological standpoint. Regarding content, it is contended that stewardship, with the ongoing learning/praxis that it requires, is a highly ethical practice. Research on this process has the potential to contribute significantly to a better understanding of what our relationship to the natural world should be.

Methodologically, a transparent data collection process was undertaken, in which all interview participants were clearly informed about the goals of the research, offered opportunities to review transcripts of interviews, and have access to the final product of this research.

Data Gathering Methods

Phase One consisted of compiling profiles of the organizations from which interview subjects were drawn. This included information on location, mission, goals, history, current focus, and level of overall community involvement through education and outreach efforts.

These profiles were drawn from primary source organizational literature, such as brochures, internal documents, newsletters, and web site information. Passages from interview responses have also been incorporated into these profiles, when they shed additional light on the organization and its work, or if they are descriptive in ways that written documents are not.

EDUCATION	PROFESSION
Housatonic River Initiative	
H.S.	machine mechanic/GE
H.S.	auto repair shop owner(retired)
M.B.A.	private business owner
B.A.	photographer
M.A.	writer/filmmaker
G.E.D.	carpenter/contractor
B.S.	HRI Exec.Dir./nursery owner
B.A.	registered nurse(disabled)
Ph.D.	botanist/professor
B.A.	various
Salt Ponds Coalition	
Ph.D.	resource economist/professor
B.A.	physical therapist(retired)
B.S.	SPC Exec. Dir./systems analyst(retired)
M.S.	Principal Marine Biologist/RIDEM
B.A.	shellfish aquaculturist
H.S.	self-taught engineer(retired)
M.Ed., M.S.	teacher(retired)
B.S.	strategic planning/marketing(retired)
B.A.	teacher(retired)
M.A.	editor(retired)
Wood Pawcatuck Watershed Association	
M.A.(candidate)	WPWA Program Director
H.S.	Chemical Plant Foreman(retired)
M.S.	Research Associate/URI
M.A.	sculptor/visual artist/educator
Ph.D.	geologist/professor(retired)
B.A.	RIRRC Mgr., Planning & Dev.
B.A.	former business owner/student
B.S.	middle school teacher
Ph.D.	oceanography prof.(retired)
M.A.	School librarian(retired)

Table 2: Educational Attainment Levels and Professional Backgrounds of Interview Participants

Final versions of the three organizational profiles are incorporated as Chapter Four. Each consists of three sections, "Background and Historical Context," "Guiding Philosophy and Strategic Approach," and "Public Education and Outreach."

Interviews were conducted over a six-month period from January – June, 2001, and were done via telephone and face to face, at the convenience of subjects.

Phase Two interviews followed an interview protocol, using the format suggested by Creswell (Creswell, 1994, p. 152) (see appendix). Questions were formulated using a grounded theory approach, with the goal of facilitating open coding of responses. "In grounded theory the questions may be related to procedures in the data analysis, such as open coding...(Creswell, 1994, p. 71)." For example, codes or categories specific to adult learning theory resulted from participant responses to questions about learning processes (i.e., experiential learning, self-directed learning, etc.).

Once Phase Two interviews were completed and transcribed, they were carefully reviewed, highlighting insightful passages and attempting to summarize these passages in two to three words. These two to three word summaries were the initial codes emerging from Phase Two interview data, and they were then collected under larger headings offered by the Interview Protocol (for example, "Patterns of Sustained Involvement" or "Patterns of Ongoing Learning").

While an effort was made to merge highlighted passages that seemed compatible with others under different names, the possibility that these responses

should be left as separate categories was not discarded. For example, under "Patterns of Ongoing Learning," there was a possibility that responses under "Learning as Immersion" and "Self-Directed Learning" could remain separate. However, a decision was made to merge these, with an elaboration of the nuances between the two offered in the discussion of the data in Chapter Five.

By the same token, a distinction emerged between those responses falling under "Civil Society/Activism" and "Making a Contribution/Taking Action". It was felt that a significant enough difference in meaning existed between these two that they should be separated. Again, this distinction is discussed in Chapter Five.

Phase Three interviews used a much more flexible, phenomenological approach to interviewing. "In phenomenology, the question might be stated broadly without specific reference to the existing literature or a typology of questions (Creswell, 1994, pp. 70-71)." This does not infer that the interviews were completely unstructured (see above discussion under 'Overall Approach' in section on "Design.") However, the interviewer's role here was primarily to listen to the stories of subjects, probing as needed with questions generated from their responses to Phase Two questions.

For example, one participant, when asked to discuss the evolution of his environmental conscience, spent much of the interview discussing a decades-long effort to establish a solid waste incinerator for the State of Rhode Island. The story was fascinating, and he was asked to elaborate on this in as much detail as possible, with occasional, spontaneous probes from the interviewer. While the story went in various, unpredictable directions, and while it was somewhat

isolated from the central focus of this research, it nevertheless generated important insights into the nature of stewardship and civil society.

Interviews were taped and manually transcribed. Participants were given the option of reviewing interview transcripts for verification and/or clarification.

Data Analysis Procedures

The study consisted of three distinct phases, each with distinct data collection methods. Further, the conceptual framework drew from a number of literatures. All of these considerations led to a flexible approach to data analysis. "The process of data analysis [in qualitative research] is **eclectic;** there is no 'right way' (Tesch, 1990, as cited in Creswell, 1994, p. 153)."

Further, while to some extent, categories emerged based on the initial conceptual framework guiding the interview protocol, other unanticipated categories emerged as well from participant responses. For example, one category anticipated before interviews were even conducted to explain initial involvement was that of experiencing a "critical incident" leading to action. However, the number of people explicitly stating that their initial reason for getting involved derived from "anger" was not foreseen.

Hence, "data analysis requires that the researcher be comfortable with developing categories and making comparisons and contrasts. It also requires that the researcher be open to possibilities and see contrary or alternative explanations for the findings (Creswell, 1994, p. 153)."

The intent has been to analyze this data, looking for common threads of experience and process. These common threads emerged through a process of

"reduction and interpretation (Marshall & Rossman, 1989, p. 114)," or "de-contextualization and re-contextualization (Tesch, 1990, as cited in Creswell, 1994, p. 154)." Specifically, "the researcher takes a voluminous amount of information and reduces it to certain patterns, categories, or themes and then interprets this information by using some schema (Creswell, 1994, p. 154)."

The intent of the three phases was to collect different kinds of data and/or to expand on data collected from a previous phase (i.e., Phase Three interviews conducted with questions generated from Phase Two interview responses). However, in some cases, triangulation resulted from this process.

> The concept of *triangulation* was based on the assumption that any bias inherent in particular data sources, investigator, and method would be neutralized when used in conjunction with other data sources, investigators, and methods (Jick, 1979, as cited in Creswell, 1994, p. 174).

Triangulation of data was not the primary concern of the three phase process, nor was it felt that triangulation would be a requirement of the data analysis process. Nevertheless, it has emerged and effectively contributed to this research's exploration of the stewardship process in at least two significant ways.

First, a number of interview comments have been incorporated into the group profiles of Chapter Four. This interview data is used in the profiles to support or expand on information contained in written documentation examined in Phase One.

Secondly, some data emerging from Phase Three interviews was used to further support patterns emerging from Phase Two interviews, especially those

patterns seeking to explain community building and group dynamics processes, which are discussed in Chapter Six.

Categories of response emerging from this research have been organized into a matrix, which is displayed in tabular form in Chapters Five and Six.

> Miles and Huberman (1984) support the concept of *displays* of the information, a spatial format that presents information systematically to the reader. These displays are tables of tabular information. They show the relationship among categories of information, display categories by informants, site, demographic variables, time ordering of information, role ordering, and many other possibilities. (Creswell, 1994, p. 154)

This has the potential to inform curriculum development for stewardship education/adult environmental education. Conclusions are offered in Chapter Seven, including implications of the findings for stewardship education and suggestions for further research.

Limitations

The study falls within the qualitative paradigm. Within this paradigm, the study's design combines grounded theory and phenomenology, and its data collection methods were limited to review of primary and secondary source material on specific organizations, as well as interviews with their members.

The study is also limited in terms of the number of questions that have been posed. Creswell recommends that a study be limited to one or two grand tour questions and five to seven sub-questions (Creswell, 1994, p. 70). Following this, I have limited the general questions to one grand tour question and seven sub-questions. A few of the sub-questions have additional sub-questions listed under them. However, a flexible approach to administration of the interview

protocol (see "Data Collection" section below, and appendix), as well as a 30 minute time limit to Phase Two interviews (see "Data Collection" section below) prevented this from becoming too overwhelming. (Nevertheless, it should be noted that a few of the Phase Two interviews went well beyond 30 minutes – in one case, the interview lasted an hour).

Conceptually, the study is limited to exploring a specific type of phenomenon, sustained involvement in environmental stewardship and the role of ongoing learning in this. Participants in the study were limited to members of specific organizations (or individuals affiliated with those organizations), and data collection, coding, and interpretation was done with the goal of pattern building (see below) and the creation of a matrix to make overall sense of the study's findings.

Personal Biography/Positionality

I consider southern New England my home and therefore have a strong interest in regional environmental initiatives. I have viewed this research process as an opportunity to gain important insights into the motivations of stewards and the ways that they learn. This, then, has the potential for each of the organizations and participants in the study to share and learn from each other. Finally, there is the possibility that knowledge coming out of this research process could be shared with environmental and stewardship educators both within and beyond the southern New England region.

My background in training and use of adult learning methodology has made me a strong believer in the concept of lifelong learning. This implies not

only that adults are continuously learning in their daily activities and day to day experiences, but also that they have a strong desire, even need, for ongoing learning. These beliefs, if left unexamined, might have had the potential to influence my interpretation of findings from this study. However, I have made an ongoing effort to remain conscious of this bias.

I have become a strong believer in both the limits of quantitative research and the strength of the qualitative paradigm. One issue that might have arisen as a result of this was the temptation to imply generalizability of findings to a larger group of actors. While the potential significance of this research is to inform curriculum development, it cannot do so through evidence of statistical generalizability. I have therefore made an effort to proceed cautiously in my analysis and interpretation in order to avoid the language of generalizability and/or other quantitative data analysis concepts. The patterns emerging from the interviews conducted for this study may or may not hold for other groups in other contexts.

Finally, although it is important to clearly identify this as a qualitative study, and to acknowledge the positionality of the researcher as influencing the research, the data analysis, and the interpretation of findings, an effort will be made throughout the following chapters to use a third person voice. This is being done for reasons of style more than as an attempt to somehow make the report seem more objective.

CHAPTER 5

PROFILES OF STEWARDSHIP GROUPS

Overview

Before exploring the complex, diverse responses of interview participants to questions about sustained involvement and ongoing learning, it is important to set the context of their work within the framework of the organizations with which they are associated. None of these environmental stewards works in a vacuum – to some extent they both shape and are shaped by the group with which they are active.

While the three groups vary to a greater or lesser extent in terms of their strategic focus and their courses of action, it will be argued that at heart they are all concerned with stewardship. Their work strives to protect, preserve, restore, and raise awareness of a specific ecosystem and/or resource base, covering a substantial geographic area. In the end, the groups are guided by a love of this place and a desire to see it preserved or restored for future generations. However, the nature and scope of the issues each group faces, both in terms of environmental threats or damage, and in terms of political dynamics present in the places that they live and work, necessitates varied approaches to their work.

Finally, each group, it may be argued, understands the importance of public education as a tool. Public education is used by each of these groups, again to a greater or lesser extent, to raise awareness of issues and the value of the resource/ecosystem, to encourage greater involvement of concerned citizens, and

in some cases to meet specific objectives (such as fundraising, political lobbying, or research).

It should be noted at the outset that the following profiles are of necessity far too brief to capture all of the complex, dynamic histories, activities, and accomplishments of these groups. Nonetheless, every effort will be made to offer a flavor of the remarkable work that each is doing.

Housatonic River Initiative

Background and Historical Context. The work of HRI cannot be understood without briefly examining the history of General Electric's presence in Pittsfield. The company began manufacturing electrical capacitors and transformers at the Pittsfield site, which consists of 250 acres and five million square feet of building space, in 1903. Over the past century, GE has employed as many as 18,000 at this complex and approximately 6,500 as recently as the late eighties (HRI web site, 2001b, p. 1). Hence, there is a long history of entire neighborhoods, through successive generations, relying on GE for their livelihood. A fierce loyalty to the company pervaded the culture of the city. "You have to understand that people lived under the wing, so to speak, of GE for decades when they were the major employer. And they were literally the mother ship, the mother entity. And when I first moved here, you did not speak badly of GE. You did not do that. I found out very quickly, if you said anything, you were ostracized (HRI member, 2001)."

At the heart of HRI's work is concern about the extent of pollution stemming from decades-long use of polychlorinated biphenyls (PCBs) in their

manufacturing processes. PCBs were produced for commercial sale to industry beginning in 1929, and GE used them in manufacturing processes from 1932 until 1977, when the EPA took steps to ban their production and use (HRI web site, 2001b, p. 1).

"Prior to 1977, synthetic oil containing PCBs were used as the electrical insulating medium in transformers. Before shipment, transformers were filled, pressurized, and tested under load.... After testing the oil was drained. Both new and used oil had to be stored and piped to various areas of the plant, mainly between storage tanks and transformer assembly/testing areas (EPA report, quoted in HRI web site, 2001b, p. 1)."

As early as 1936, research done at the Harvard School of Public Health indicated systemic health problems resulting from exposure to PCBs. "The chlorinated diphenyl [the scientific name given to PCBs at the time] is certainly capable of doing harm in very low concentrations.... These experiments leave no doubt as to the possibility of systemic effects from...chlorinated diphenyls (Harvard report, as quoted in HRI web site, 2, 2001b, p. 4)."

Initially, PCB use persisted because there was no substitute for their use in industrial processes. One executive of Halowax noted, referring to a product containing PCBs in the mid-1930s, "The first reaction of several of our executives was to throw it out – get it out of our plant.... But that was easily said but not so easily done. We might as well have thrown our business to the four winds and said, 'We'll close up,' because there was no substitute and there is none today in

spite of all the efforts we have made through our research laboratories to find one (Kraimer, quoted in HRI web site, 2001b, p. 4)."

Additionally, there is the issue of efficiency and cost. "The U.S. government interdepartmental task force estimated that PCB impregnated capacitors are 1/6 the size, 1/5 the weight, and 1/4 the cost of comparable oil impregnated capacitors, providing the advantages of reliability, long life and compactness (Shalk, as quoted in HRI web site, 2001b, p. 3)."

Despite their use for 55 years in GE's Pittsfield operations, it is conceivable that, with proper disposal of waste and a concerted effort by the company to minimize unnecessary exposure of employees to PCB-contaminated oil, many of the problems faced by GE workers, Pittsfield residents, and other Berkshire County stewards of the Housatonic ecosystem could have been avoided.

Unfortunately, HRI's research has revealed a pattern of decades of pollution, resulting from both leakage in PCB-containing oil storage and transfer facilities and, far more disturbingly, in efforts to rid itself of the massive amounts of waste generated on an almost daily basis. The following anecdote reveals just how extensive this problem became for GE, and exposes one of the most troubling strategies they used to address the issue of waste disposal.

> They were doing several things simultaneously. They were using their own land. They were trucking six to ten tractor-trailer loads a day to the city dump, and they were still generating material. So, they had a multi-pronged, they hired independent truckers to take it to other dumps.
>
> They established a residential fill program where they basically made.... One of the things that was happening is, there was so

> much oil on the floors of the factory, plus they were using this material, Fuller's Earth, to, sort of strain the oil, as a filter. It was sort of like a kitty litter substance. So they were generating it in several respects in the industrial operation. And they were filling 55 gallon barrels of this stuff. They offered to any GE worker free fill. And it turns out that many of the workers lived in one particular area, the Lakewood section, which was again part of the floodplain. And many of the homes were wet. The backyards were wet. And so, people were just filling up their backyards (HRI member, 2001).

This is the most shocking example of GE's seeming disregard for the health and safety of its workers. Yet it does not begin to address the extent of the pollution generated over the years. The reality is that no one knows for sure how much PCB-tainted oil is lying dormant in the subsurface sediments of the Housatonic, along the banks of the river (especially in the half mile reach closest to the GE complex), throughout the Housatonic floodplain, and in other areas (such as the Hill 78 landfill, located 50 yards from an elementary school in Pittsfield, and a children's park built over PCB-contaminated fill). In any case, HRI firmly believes that a 1983 document, prepared by GE consultants and referenced repeatedly over the years by USEPA and Mass DEP, estimating the total amount of PCB-contaminated oil extant in and around the Housatonic to be no greater than 39,000 pounds, severely underestimates the real amount (HRI web site, 2001a, p. 6).

As evidence of this, there is the testimony of a former GE Manager of Tests, who stated in 1990:

> People don't realize that Pyranol [GE's registered name for the PCB-containing oil used in transformer production] is twice as heavy as water. You put a gallon of Pyranol in water and it sinks right to the bottom. Within that twelve and a half pounds of Pyranol weighs, seven pounds of every gallon is PCBs. We used

> to use an average of 20,000 gallons of Pyranol a week. And this, if you do simple mathematics, this is 140,000 pounds of...PCBs a week that we were handling. And we had a loss rate: spillage, overfilling of about 3% so this says that every week we would lose between 4 and 5,000 pounds of PCBs that would go down the drain and into the river.... About a million and a half pounds of PCBs have been plowed into that river. I imagine a good 30% is left. (Bates, as quoted in HRI web site, 2001b, p. 2)

The emergence of HRI coincided with a large number of layoffs of GE workers in the late '80s and early 90s.

> That all happened because a bunch of river folks kind of decided that something needed to be done. And, what had happened is, at the end of the late '80s, GE started moving out, you know? Left and right, and the whole political climate changed to one of where everyone was working at GE to where everybody was getting laid off by GE. And they were telling the union folks that, you know, "Oh, there was no more work." But meanwhile, they were building plants in Mexico City. And the workers kind of felt that they were getting the scam, which they were.
>
> And so, they became very, very sour. The employment presence went down. And there seemed to be, all of a sudden, about '91, there sort of seemed to be a, sort of like a, I don't know what, how to call it, but kind of like a vibration in the Berkshire County air. That people were ready to say they wanted their river back. (HRI member, 2001)

Formed in 1992, HRI's activities continued to pick up momentum until a reporter for the Berkshire Eagle discovered an internal GE company memo revealing and at the same time critical of the residential fill program. Exposure of this memo, coupled with the realization that GE had done nothing to address it, led to national news coverage for HRI and was a critical turning point in convincing government agencies that GE should commit to a clean up.

> It was just this moment in time when we had generated a lot of pressure on the EPA and the State Department of Environmental Protection to force them to sort of double their oversight efforts. And we made a lot of headway. But the moment these internal

> memos that detailed the extent of this dumping regime, including all of the residential fill documents, became public, it became a national news story (HRI member, 2001).

The link between environmental issues and social justice issues could not be any clearer than it is here. It is certainly to the credit of various local and national media outlets that they understood the degree of injustice inherent in this story. It is nevertheless unfortunate that pervasive contamination of a precious resource might not have been enough to focus attention on the Housatonic ecosystem or to encourage action towards remediation.

> The fill property thing was the thing that, if HRI hadn't been really successful in helping to open that up, I don't think there ever would have been a settlement. And the reason why is because the fill property was so outrageous, and it was sexy in the press. Before that, we had a river and we had a contaminated plant. Cities all across America have a contaminated river and a contaminated plant all vying for funding, and it doesn't really get the front page of most newspapers (HRI member, 2001).

In late 1999, a negotiated settlement, referred to as a Consent Decree, was entered into by General Electric, the USEPA, the Mass. DEP, and the City of Pittsfield, charting the course for a long-term, comprehensive cleanup of the Housatonic and its environs. Despite the scope of the cleanup agreement, HRI firmly believed that it fell far short of what was necessary. In February, 2000, the group filed a pro se motion to intervene in order to lobby for a stronger agreement. However, after negotiating intensely for a month with the agencies, the Board of HRI voted 7-5 to withdraw their motion to intervene and to accept the Consent Decree, in return for the agencies' acceptance of 11 demands they had put forth (HRI web site, 2001d, p. 1).

Perhaps most disappointing to HRI was not the fact that, in the end, they gained less through the Consent Decree than they had hoped for, but the fact that, at GE's insistence, they were never invited to the negotiating table in the first place, despite years of dedication and commitment.

> We were very saddened when the EPA told us that we couldn't be at the table. We had been at every meeting for ten years. We deserved to be at the table. If anybody deserved to be at the table, it was HRI. And we would have been there, and we would have been constructive and an asset, we think. I mean, General Electric wouldn't have been happy, but we certainly would have been an asset. The EPA needed us for a lot of years when they needed the marching in the streets and the demonstrations and things that we did for a number of years to elevate the site, but then we're not at the table. (HRI member, 2001)

Despite the apparent finality of the Consent Decree, much remains to be determined more than two years after the Board's vote due in part to ongoing legal battles and the fact that the cleanup is still very much in its early stages. HRI continues to pursue its watchdog, advocacy role. They continue to garner national recognition for their ongoing stewardship, as evidenced by their recent designation as River Keepers by Bobby Kennedy's group (Gray, personal communication, 2002).

Guiding philosophy and strategic approach. When asked to describe the guiding philosophy of the Housatonic River Initiative (HRI), most of the people interviewed responded, almost automatically, "a fishable, swimmable river," referring to the Housatonic. Upon visiting the HRI web site, one comes repeatedly across the group's mission, "HRI: Working toward a fishable, swimmable river (HRI web site, 2001b, p. 1)."

This is an important point, because when one explores their documents, speaks to members, and begins to understand their history, it is easy to misunderstand a number of things. First, one might be tempted to dismiss the group as one concerned only with public health and making a huge, multinational corporation accountable for decades of dumping of PCBs and other toxic chemicals. This is stated in the group's manifesto, published in their first newsletter. "The Housatonic River and its associated tributaries and wetlands shall be cleansed of all toxins, including PCBs, and there shall be no discharge of waste into the river (HRI web site, 2001a, p. 1)."

While this is a critical and valiant goal, it may give one the mistaken impression that the group does not have a holistic understanding of the Housatonic River and its ecosystem. Yet the very next stated goal in the manifesto makes it immediately clear that they do have a comprehensive, long-term understanding of the nature of their mission. "Broad reaches of land along the river shall be protected by public ownership, and the public shall enjoy access to both land and water in pursuit of pleasure and enjoyment; appropriate improvements such as foot trails, bicycle paths and boat launches shall be encouraged for the public enjoyment (HRI web site, 2001a, p. 2)." This goal is clearly in line with the goals of stewardship, of holding the resource in trust for future generations. Additionally, it indicates a holistic understanding, both in terms of resource management and land use issues.

Secondly, it may be tempting to dismiss the group as one that never had any intention, even from its beginnings and despite its more broadly stated goals,

of doing anything but fighting GE. Yet, original members came together, more than anything else, out of a common love for the river and its environs. "The people who really spend the time and energy doing this,...none of them were initially motivated by anything other than a love of the river. And in fact, we didn't know how contaminated the land was when we began this. We knew that we had a river, we couldn't fish in it, we couldn't swim in it (HRI member, 2001)."

If anything, their decision to devote the vast majority of their energies to fighting GE can be seen as emerging out of their very holism, out of their willingness to try to discover as comprehensively and as fearlessly as possible the real source of the river ecosystem's problems.

> We started out focusing on trying to basically jumpstart the environmental agencies to clean up the Housatonic River. In the process of doing that, as we became more educated about the extent of General Electric's use and misuse of PCBs, that work broadened to include cleanup of PCB sites beyond the river. The industrial plant, the contaminated homes and businesses in Pittsfield. So, in the process we became more than just a river group (HRI member, 2001).

This understanding of stewardship as both intertwined with a concern for public health and safety and as seeking to get at the roots of environmental problems is further evidenced in the following comments. These comments were part of an August 1993 memo containing public comments from HRI to the USEPA urging careful, comprehensive assessment of the damage to the Housatonic and its environs before making decisions on a cleanup.

> Public health and safety as well as effective stewardship of the Berkshire County environment demands the most conservative assumptions in risk assessment. Each day the scientific and public

> health communities are learning more and more about the complicated toxicology of PCBs. Now is not the time to relax risk assessment standards. (HRI web site, 2001a, p. 14)

Despite the expanding scope of HRI's work, necessitated by the group's commitment to determine the true nature and breadth of the environmental problems faced by the river ecosystem, they have continuously made an effort not to lose sight of their original goal, protection and preservation of the river.

> If you start out caring about, let's just say, a river, and you discover that the root of the problem is chemical contamination, let's say. And you discover you live downstream, it doesn't take a genius to know that if you follow the river to the source of your contamination and you want a clean river downstream, you've got to clean up the river at its source. And if it turns out that the source was Pittsfield, it was General Electric, it was this 250-acre industrial plant, and all of us sort of took that journey upstream, we discovered that, still thinking downstream. (HRI member, 2001)

Third, it may be tempting to see HRI as a group that will simply fold once its fight with GE is considered over. However, it is evident that the group intends to continue its work indefinitely, recognizing that other issues may arise and that stewardship is an ongoing responsibility.

> Were we to get GE to clean the river all the way in south County, then we'd be able to spend more time on some of the problems that other river groups spend their time with. But it's such an overwhelming, massive problem to get those PCBs out of there, that everything sort of pales by comparison. And we made this decision not to ignore the other stuff and to care about the other stuff and to take action, but the magnitude of the problem has led us to spend 95 percent of our time dealing with that. So, it's just sort of necessity. (HRI member, 2001)

Finally, one might be misled to see HRI, despite its stated concern for the river ecosystem, as being only concerned with the public health and safety issues

confronting the Lakewood residents of Pittsfield, where much of their efforts have been centered.

Again, while this is a critical, valiant goal, it is important to note that HRI does not see the problems of Pittsfield as isolated from the relatively affluent, rural, and relatively less polluted towns of southern Berkshire County. It seeks to remind south County residents that their fate is inevitably linked to that of the effected citizens of Pittsfield. Regarding plans to dump contaminated river sediments and soil in a pre-existing dump rather than selecting remedial treatment to break down the toxic organic compounds present, HRI offers the following:

> When it's time to clean the rest of the river, the Hill 78/71 dumps will be filled. If I were GE, I'd argue that since the EPA agreed to dump in Pittsfield, they believe it's safe, they know it works, so let's landfill down in South County. And I'd refuse once more to treat any river contamination.... So if you let them dump GE's poison near a school in Pittsfield, and you want your river cleaned, you better start looking for some large potential dump sites down south. In keeping with the school motif, how about if the DEP and the EPA put it across from Lenox High, or Monument Mountain, or maybe Searles School in Great Barrington? (HRI web site, 2001c, p. 5)

Even barring this not altogether unrealistic scenario, HRI seeks to remind its membership and the residents of South County that they should be morally outraged, at the very least, and ideally committed to action to contest the decisions of the EPA having a direct impact on Pittsfield residents. For example, commenting on a decision reached in 1999 to dump PCB-loaded sediment and soil on top of a pre-existing dump located fifty yards from an elementary school, HRI states:

> For those of you who live in Pittsfield far enough away from the site, you might say, "Hey, it's got to go somewhere! That's the

> best place for it. It's already poisoned." For those of you who live in Lenox, Lenox Dale, Stockbridge, Lee, Great Barrington, and Sheffield, you might say: "Well, at least they're finally getting around to cleaning some of the river." Yet, for those who live, or work near the 11-acre, or send their kids to Allendale [the effected elementary school], it's an unnecessary tragedy. And, the fact of the matter is, the rest of us need to do whatever we can to make sure this doesn't happen. (HRI web site, 2001c, p. 1)

Public Education and Outreach. Over the years, HRI has done much to educate the public about problems facing the Housatonic River ecosystem and potential solutions, organizing and hosting symposiums on public health issues related to PCB exposure and remedial technologies. They have brought in guest speakers, experts on these issues, to address the concerns of Lakewood residents and to answer their questions. They have done hundreds of presentations to students, from elementary school to college age, and they regularly publish a newsletter, mailed out to over 2,300 people and available on their web site. All of these efforts have been made with far more than mere information dissemination in mind, and they are hardly seen by HRI members as isolated efforts unrelated to their other work.

> I don't think that education is a separate component. It's probably the most critical component, and by education, I just mean informing people. And if people are informed...Okay, the premise here is that PCBs aren't good for you. If you can inform people of that fact, and keep them interested long enough to understand why they're not good for you, how long it's going to be before they effect you, you know, why it is that you may not be feeling sick at the moment, you know, but in fact you're being made sick on a longer time scale, what can be done about it? You suddenly have a potential group of citizens who are willing to sign a petition, donate some money, show up at a meeting, do whatever it is to say, "Hell no, we won't go. There's some shit we will not eat." (HRI member, 2001)

In the final analysis, public education efforts that do not lead to greater citizen involvement are seen as an exercise in futility. Ultimately, this is the goal of all of HRI's education and public outreach activities.

> And, so, everything is about that first round of education and information. If you can't convince them that the information warrants action of course you're not going to get any action and maybe you're, either you're doing a poor job or the information doesn't warrant any kind of activity. And so, it's all about information. And that's what getting stories about you in the local newspaper means, that's what putting on symposiums means, that's what having a newsletter means. That's what going around to various schools and talking to kids means, and getting them out on the river and showing them things, that's what all of that stuff adds up to. (HRI member, 2001)

Successfully getting the message across about PCBs presents special challenges because their effects are not manifested in clearly visible, traceable ways.

> Our job is particularly difficult. 'Cause you can't see it, you can't taste it, you can't point to someone with sores all over their body and say this is what happens. So, it's a relatively difficult issue to convince people that there's really a problem with all these PCBs here. Especially people who have lived around PCBs all of their lives, like in Pittsfield. (HRI member, 2001)

Nevertheless, strategic public education not only can act as a spur to citizen involvement and action, it can also facilitate critical data collection in support of a group's advocacy.

> You start to talk to people, and you get sort of an unofficial head count of the numbers of cancers that have shown up among people whose families live near the facility, the GE facility. And suddenly, the red dots on the map are adding up to what seems to be an inordinate number. You know, sometimes with three or four or five people within the same family having cancer. Is it PCBs? We don't know, we don't know. But, all I'm saying is that, it's only when you bring in the experts that, bring in the information, and try and show people that there's something that really they

might be able to do something about that's worth doing something about, then you have some people on your side. (HRI member, 2001)

Salt Ponds Coalition

Background and Historical Context. The Salt Ponds watershed ecosystem stretches across four towns in southern Rhode Island's Washington County, running from the southwestern most opening of Narragansett Bay, at Point Judith, to close to the Connecticut state line at Napatree Point at the mouth of Little Narragansett Bay. This ecosystem covers an area of approximately 50 square miles.

The salt ponds, or coastal lagoons as they are sometimes referred to, and their environs consist of a watershed separated from the rest of southern Rhode Island by a terminal moraine formed during the Ice Age. Their natural beauty, proximity to other summer tourist destinations in southern Rhode Island (including ocean beaches, Narragansett Bay, Newport, and Block Island), and their suitability for recreational activities and shellfishing, have led to a number of significant use conflicts and development pressures over the years. "The ponds are a unique resource for Rhode Island and a sensitive ecosystem which is threatened by the recent, rapid development of the region (SPC brochure, undated)."

The Salt Ponds ecosystem has not faced the threat of significant commercial or industrial development in quite some time (there was a serious, nearly successful proposal to build a nuclear power plant at the site of a current nature preserve adjacent to one of the ponds in the 1970s). However, residential

development has led to a serious problem of nutrient loading in the ponds due to poorly maintained septic systems.

Nutrient loading occurs when wastes from septic systems do not break down properly and eventually leech into the groundwater and the ponds. It also is a result of runoff from lawn fertilizers containing phosphates and nitrates. Heavy nutrient loading stimulates aquatic plant growth, which in turn leads to higher levels of dissolved oxygen (DO) in the ponds. Greater levels of dissolved oxygen threaten the abundant shell and finfish populations present in the ponds. Further, heavy nutrient loading makes existing shellfish unfit for human consumption, leading state agencies to close some shellfish beds indefinitely.

The fragility of this ecosystem, the recognition of it as a valuable, irreplaceable resource, and the understanding among its stewards of the slow, creeping, incremental nature of the impacts upon it, led concerned citizens to incorporate as a non-profit in 1986 "to act as a focal point for programs designed to preserve nine coastal salt ponds along Rhode Island's Atlantic coastline (SPC web site, 2001a, p. 1)."

The group's membership has grown dramatically in the past few years, increasing from approximately 250 to over 500 (SPC member, 2001), while they continue to consistently, quietly pursue their advocacy.

Guiding Philosophy and Strategic Approach. At the bottom of the front page of SPC's brochure is the following statement: "Southern Rhode Island's Stewards for the Coastal Environment." This sense of the group's role is commonly understood and shared by members, who describe the guiding

philosophy of the group as "committed to preserving and protecting the Salt Ponds," "commitment to preserve and protect the quality of the Salt Ponds, the water itself, so that the life, animal and plant life in that environment will continue," "to restore, preserve the health and basically to preserve the salt ponds for future generations (SPC members, 2001)."

The mission of the group, stated broadly, centers on the fact that "the salt ponds are a resource unlike any other in New England. Preserving their uniqueness is our mission (SPC brochure, undated)." This mission has four components.

First, SPC is committed "to educate the residents of the salt ponds region about the salt ponds' value to the economy and how they, as individuals, can contribute to the well being of the resource (SPC web site, 2001b, p. 1)."

This focus on educating the citizenry about the economic importance of the Salt Ponds may be open to question by some. It may be argued, for example, that the ponds should be protected and preserved because of their value as a unique natural ecosystem, and to prevent the permanent loss of habitat likely to result from significant damage to them. It may be enough to simply state that they are inherently worth preserving, for their natural beauty and/or for watershed residents' deep love of this ecosystem.

However, the focus on economics models a strategy popular among environmental groups in recent years. In a market economy, it is necessary to convince political decision-makers and stakeholder groups of the economic value of a resource. Otherwise the argument of worth holds no merit. It is unfortunate,

but likely a reality, that political decisions effecting natural resources rest on this kind of thinking.

For example, a developer might propose a change in zoning to allow a cluster or commercial development on the banks of one of the ponds, arguing that it will create jobs and an expanded tax base for the municipality. It then becomes necessary for advocates of the resource, such as SPC, to argue that in fact, by leaving the ponds undisturbed, just as they are, the economic benefits will be greater in the long run. For example, by providing an ongoing livelihood for shellfishing, or by collecting user fees from tourists for hiking, bathing, or recreational boating.

The logic of such an argument is reinforced by the following anecdote.

> If some guy's going to come along and say, "Look, if we put a shopping center in here, it's going to mean like three thousand jobs," or whatever it is, somehow find a way to counter that and say, "Well, if you don't put it there, it's going to be worth so much of something down the road." And at that point, we didn't have all this knowledge about cost of community services versus, you know, open space, and all of that stuff. We didn't know that open space, for every dollar of tax you collected only cost you thirty six cents, whereas a four family house, four bedroom house, every dollar, it cost you a dollar thirty five. (SPC member, 2001)

Beyond this pervasive and frequently prevalent misunderstanding among land use planners and decision-makers about the economic benefits of a stable natural resource base and ecosystem, there is an additional misunderstanding about the value added from these resources, beyond their baseline.

> There was an outfit over in Connecticut that's gone now called the Sounds Conservancy who somehow I got friendly with.... And those guys had done some studies about the value of shellfish, and they said, "You know, it's worth...five thousand dollars when it gets to the dock. And from that point on, the value of that boat

> load of quahogs multiplies five times when you blow it up through the brokers, through the restaurant owners, the fish stores, the waiters…
>
> You know, you pile that onto the basic price that you got for the clam, and you've got a whole different impact on the economy. And we began to put that kind of stuff out, and say, "Look, this is a five million dollar at the dock, hard shell clams, 1992, in Rhode Island, five million dollars at the dock, twenty five million dollars into the economy." And if we'd been able to figure now, ecotourism, throw that in there, clean water. You've got twenty five thousand visitors coming through the tourist center here, spending x amount of money in the area. If you had polluted water, most of them wouldn't be here. Guys wouldn't be buying boats. On and on.
>
> You can build, I think that the clean salt ponds here are probably worth to the economy of the four coastal communities here, probably six hundred million dollars a year in revenue from associated fishing industry, tourism industry primarily. (SPC member, 2001)

Secondly, SPC seeks "to act as a conduit between the residents of the coastal communities and state and local governments for the flow of all information vital to the survival of the salt ponds and their environs (SPC web site, 2001b, p. 1)." This is also about public education through information dissemination. It is a vitally important role, because direct, ongoing communication between state agencies, municipal governments and the citizenry, even assuming the best intentions of agency and municipal representatives, is extremely difficult to do effectively and consistently, due to low budgets and busy schedules, both of the representatives and residents.

Third, SPC intends "to implement programs which enhance the environment of the salt ponds and contribute to their protection, preservation, and

economic well being (SPC web site, 2001b, p. 1)." This is the heart of SPC's work, and much of their educational activities are in direct support of this.

In 1993, SPC merged with the Salt Pond Watchers, a group founded in 1985 which "was the first volunteer water quality monitoring group in the nation (SPC web site, 2001c, p. 1)." This continues to be the group's most significant, ongoing contribution to the stewardship of the region.

> Pond Watchers sample the salt ponds biweekly from May to September, and analyze these samples at the University of Rhode Island's Microbiology Department. The resulting water quality data is supplied to the state's Department of Environmental Management and coastal area communities. These agencies use this data to help make decisions regarding subsequent public use of the salt ponds. (SPC web site, 2001c, p. 1)

This is a valuable, critical contribution. It is admirable in that it is done in a quiet, consistent way by a large group of dedicated volunteers. It is neither glamorous nor earth shattering, but it is important work, the results of which benefit all users of the ponds, now and in the future.

Nevertheless, if it was done in a vacuum, without an effort to look at larger, long-term patterns of residential development, recreational and economic use, and the role of local and state agencies in governance of the resource, its value might be open to question. In fact, the initial justification for SPC's formation was to act as advocates on behalf of the Salt Pond Watchers.

> The Salt Ponds Coalition [was formed by a few of the] people who had also started the Pond Watchers, because [they] realized that as they found out things, that they needed somebody to advocate for correction of any problems that the Pond Watchers turned up. So, the Coalition was really started as an advocacy group to take the Pond Watcher information and make sure that it got into the town's hands, the state's hands, and that people understood what was going on. 'Cause the Pond Watchers didn't want to go in and

> explain to the meetings anything about bacteria or nitrates or any of that stuff. That wasn't their thing. (SPC member, 2001)

However, SPC, while quietly pursuing their advocacy and seeking to maintain positive working relationships with local and state government, has nonetheless not shied away from seeking root causes of problems effecting the ponds and their long-term solution.

One example of this is "New Approaches to Septic System Education," a funded project seeking to educate "new home buyers, and/or builders, renters and people expanding their current homes" about septic system care and alternative technologies for wastewater management. "The creation of more effective educational packages for the specific groups mentioned is a project goal. An advisory board of realtors and building inspectors will help determine more appropriate, alternate channels of distribution for the new educational material (SPC, 1998, p. 2)." Again, this type of advocacy and education may not strike one as very glamorous, but it is critically important.

As SPC has grown and expanded their focus, in an effort to both understand the salt ponds ecosystem more holistically and address root causes of ecosystem damage, they have sought to work in partnership with a variety of other groups. "Partners are a key ingredient in our program development. They greatly expand our resources (SPC brochure, undated)."

The South Shore Habitat Restoration Project is an important example of this. The goal is "to selectively restore once productive, now damaged habitats in the breachway tidal deltas of Ninigret, Quonochontaug and Winnapaug Ponds using a combination of choices that include planting, seeding, and sand removal.

To restore, as well, fish passage in the salt pond tributaries leading to Cross Mills Pond and Factory Pond (SPC, 2000, p. 1)." SPC is one of many partners on this project, which also includes state and federal agencies, municipal governments, and the University of Rhode Island.

Finally, it should be emphasized that this third component of the SPC mission, the program implementation component, is pursued in a spirit of innovation and an ongoing effort to seek creative solutions to problems. "We constantly seek new ventures that help the geologically unique salt ponds withstand the pressures of rapid growth.... We continually search for new ways to protect and preserve the Salt Ponds Watershed (SPC brochure, undated)."

An intriguing example of this, again done in partnership with other groups, is the Southern Rhode Island Green Trail. This "protects our heavily used beaches and ponds by giving thousands of annual visitors alternative locations for recreation. Our growing Green Trail Quests are a unique way to discover all the natural assets of the watershed (SPC brochure, undated)." The essential strategy is to direct recreational users to other parks, trails, and natural areas in an effort to reduce some of the pressure on the ponds in a way that is educational and fun.

The fourth component of the SPC mission is "to make our ecological experience available to residents of other New England coastal areas with similar needs (SPC web site, 2001b, p. 1)." SPC has infrequently partnered with similar groups outside of Rhode Island, and again, the Salt Pond Watchers were nationally recognized for their pioneering work in volunteer water quality monitoring.

Again, all of this is done in a quiet, largely non-confrontational, but effective way.

> I'm impressed with the people out there that are silently working. The number of people, you know, they're out there, they're working on this thing. They don't necessarily want to be recognized for it. They're just happy to do this thing, which they know is a good thing to do for their environment. They're trying to be conscientious, and it's just amazing, when I talk to these people, how many of them have been doing it for such a long time, you know. And it's wonderful, that those people are out there.
>
> And they're really people that you can depend on, this particular group of people. I mean, I'm out in the boat with a 73 year old man, I'm 71, and we're dumping these clams over the side, you know, of the boat. And he's been doing this (we were chatting), he's been doing Salt Pond work for maybe twenty years. So, that's what is really, that I've gotten out of this thing is the number of people that are dedicated to this, and they're not making a big hullabaloo out of it. (SPC member, 2001)

Yet, this quiet, steady, approach to advocacy should not be seen as undermining or diminishing their persistence. They consistently monitor the actions of state agencies and/or legislators, communicating with them on an ongoing basis, and working on behalf of the Salt Ponds ecosystem. "We're not a big, go to the statehouse and lobby type people. We're...go to meetings, go to meetings, go to meetings.... We're doing well, I think.... We're the watchdogs, you know, we're the guys, we're not, maybe, ready to pounce. But we're the guys in the back, watching over their shoulders to make sure they don't really screw it up (SPC member, 2001)."

Public Education and Outreach. SPC's public education and outreach efforts can certainly be seen as a means to an end. Besides regularly published newsletters, the group's most important, steady public education initiative is their

summer seminars. Each year, four to six seminars are scheduled on various themes, publicized widely in the area, and offered free of charge to the general public.

> Every summer, for the last, oh probably seven or eight years, we've run a series called our summer seminar series, that starts typically in June and runs, I mean we have a seminar once a month from June through September.... Those seminars can be related to all kinds of things. Not necessarily the Salt Ponds per se, but we do things like, one of the most popular kind are items, or seminars oriented towards gardening, "Gardening by the Sea," "Natural Use of Plants," "Natural Use of Trees," "Development of Buffers," things like that.
>
> Other ones are on local projects that may be federally funded, big projects that people are curious about 'cause they say, "Well, you know, these guys are going to start messing up those ponds if they don't do it right." And so, you get them to come in and talk. So that's the main vehicle we use to educate the public, whether it's our members or not.
>
> Typically, we'll run anywhere from 35-100 people. They've become very popular, and that's become kind of our, in addition to the water quality monitoring, it's kind of become our trademark.
>
> Everyone kind of has their niche, and things like that, they grow, because you've tried them more than once, and you build on them, but that's become kind of our specialty, I guess.
>
> And when you do that, you get good speakers, because they know people are going to turn out to hear them, and so it kind of feeds on itself, you know? (SPC member, 2001)

By offering a broad spectrum of topics, publicizing them consistently, and responding to the concerns of residents in selecting some of the topics, SPC has reached a wide number of people. It is likely that these seminars have contributed to both the growth in the group's membership and the active involvement of concerned individuals.

> We're always running out of pond watchers and good directors and influential people that, for lack of any other words, knows somebody somewhere that can make us more credible or get the dredging done that's necessary, or plant the eel grass. I mean, there's some politics in this. And, if you can get the right people involved, and that happens through these little weekly or bimonthly or monthly talks that we have. People come and they get enthusiastic. So, it's a good deal (SPC member, 2001).

However, the Summer Seminars and the newsletter are not the only kinds of public education materials that SPC has developed over the years.

> Part of our mission is education, so that during the past several years we've created new kinds of educational materials to reach different people that we want to reach, and educate them about the resource and the protection of it. We've developed videotapes, we've developed all kinds of different sorts of materials, waterproof stickers that go in the shower that tell you, or in the bathroom, that tell you what not to put down your drain, and things like that, so.... You know, they're fairly typical, anyway of the stuff we do. (SPC member, 2001)

While SPC's varied and innovative efforts continue, there is nonetheless an understanding of the challenges to reaching a certain portion of the target audience. An innovative project working with the local high school to develop a videotape on septic system maintenance was remarkably successful on a number of levels. First, it created an important educational tool in a widely accessible format. Second, it engaged high school students in concern for their environment, giving them a greater sense of responsibility and understanding of their own potential role in community stewardship. Third, it allowed SPC yet again to try a new approach in working towards its goals.

However, the limits of such a project, in terms of the reality of how many people are likely to watch such a videotape and learn from it, are also recognized. "You'd like to get certain people. The question is, how do you get to them?...

We haven't really figured out how to put this kind of subject on the same level of consciousness as, you know, Super Mario or something. Maybe that's what we need, maybe we need some kind of video game that gets you rewarded for fixing your septic system, or something (SPC member, 2001)."

In the end, although there is a recognition that important stakeholders have not been reached through their educational efforts, SPC understands that consistently offering a varied, timely program of seminars (while continuing to creatively test new media and formats) is half the battle. They feel that offering educational seminars is a responsibility, that these seminars have inherent worth, and that they have the potential to directly change the behavior of residents and users of the Salt Ponds ecosystem.

> I think that what we're doing is good insofar as having a program there, and the people can go to these things.... I think you have to just keep offering these educational things. Some of them are political education, insofar as getting a Senator to come down and talk about what he or she would like to do to put a certain bill through that would help water quality, and things of that nature.
>
> Others are scientists themselves, that talk about beach erosion.... And, some of these things, you'll get a lot of people coming to, and there are other things that, you know, you get a couple dozen people, and that's it. You know, it's not good attendance.
>
> So, it's difficult to say, but I think that we should go forward with our educational program for the adults. (SPC member, 2001)

Wood Pawcatuck Watershed Association

Background and Historical Context. The Wood Pawcatuck Watershed, located in southwestern Rhode Island and southeastern Connecticut, includes all or part of ten Rhode Island towns and four Connecticut towns. It covers more than 300 square miles, 86 percent of which is forested, wetland, or open space, 3

percent of which is water, and 11 percent of which is developed (Wood Pawcatuck Watershed Association, undated, p. 1).

It is significant that the Wood Pawcatuck Watershed Association (WPWA) defines the scope of its work in terms of a watershed, which may be defined as "all the land area that drains to a common outlet, be it a lake, a stream, a river, or a bay (Pawcatuck Watershed Partnership (PWP), undated, p. 1)."

Another term significant to an understanding of the importance of a watershed as a target for environmental stewardship is aquifer, which is "a series of sand and gravel areas underground that hold vast quantities of groundwater which is easily pumped out (WPWA web site, 2001b, p. 1)."

Much of the sparse, early European settlement of the eighteenth and nineteenth centuries was centered around farms and mill villages. The area was particularly suited to mills because of the abundance of running water available for powering their operation.

> Industries within the watershed exploited stream and river waters for processing as well as for power. Textile mills in particular used water for various operations, but all used the water to eliminate waste with little thought about consequences to the environment. As communities grew, they came to use the rivers for sewage disposal. Lack of municipal sewer systems or individual septic systems also contributed to the contamination of subsurface drinking water supplies. (PWP, undated, p. 2)

Ironically, while most of the mills have been closed for decades, resulting in much cleaner river water over time, the watershed has faced another, increasingly difficult challenge over the past half century or so. This is the problem common throughout the entire eastern seaboard and much of the rest of the U.S. – that of incremental, occasionally explosive suburban development.

Despite its distance from the two largest cities in the region, Providence and New London, the watershed did not completely escape this trend.

> Suburban growth exploded after World War II.... Federal housing policy encouraged new construction and discouraged investment in inner-city neighborhoods. The Interstate Highway Act of 1956, intended both as a defense mobilization reinforcement during the Cold War and as a personal and commercial transportation improvement, provided easier escape from the cities. Population trends for watershed towns dramatically illustrate this period of rapid growth, especially after the completion of Interstate Highway 95 in the late 1960s and the widening of Route 1 along the south shore. Large-scale commercial development soon followed the thousands of new residents. (PWP, undated, p. 2)

The fact that only eleven percent of the watershed consists of residential and commercial development may lead one to assume that the watershed has thus far largely avoided the problems associated elsewhere with suburban development. Upon closer examination, however, this is not the case.

> Suburbanization has exerted profound effects on the watershed's environment. Suburban residential tract development has claimed former farmland and second-growth forests, leaving less and less open space. Phosphorus and nitrate nutrients from suburban septic systems can both trigger algal growth in rivers and estuaries and contaminate groundwater. Oil runoff from roads and large parking lots contributes significantly to nonpoint pollution. Large numbers of automobiles produce water-soluble exhaust contaminants that pollute both air and water. (PWP, undated, p. 2)

Again, even while acknowledging the existence of these problems, it could be argued that they are not as severe here as in other places throughout the northeast. Nevertheless, at least two ongoing concerns make stewardship of the watershed critical. First, "the region has some of the last remaining contiguous forests between the megalopolis of New York City and Boston (WPWA web site, 2001a, p. 1)." Beyond this, "the watershed...is home to nearly 70% of RI's

globally rare species and 65% of the state's rare species and unique natural communities (WPWA web site, 2001b, p. 1)."

While habitat protection is a worthy and necessary goal of WPWA's stewardship, there is another, more directly practical reason for preservation and protection of the watershed's resources. "In 1987 the region was designated by EPA as a *sole source aquifer*. In this case, all of the approximately 100,000 residents who live and work here depend on groundwater for all their drinking, household, industrial, and agricultural needs (WPWA web site, 2001b, p. 1)."

The potential for long-term damage is pervasive, and development proposals must be considered carefully. For example, the group contributed successfully to efforts to oppose the siting of a landfill in the watershed several years ago, the consequences of which could have been devastating to the sole source aquifer. "It was going to be a construction landfill. And the big thing is, it's over a sole source aquifer. There're a lot of sand and gravel aquifers around here that are extremely susceptible to any type of pollution. And once you pollute them, that's it. It's, you know, decades to clean up something like that (WPWA member, 2001)."

In 1983, in conjunction with a National Park Service inauguration ceremony, designating the Wood and Pawcatuck rivers as "unique and irreplaceable resources," the WPWA was founded (WPWA, undated, p. 1).

In recent years, there has been a growing movement by environmental groups to redefine the geographical boundaries by which political decisions are

made in terms of watersheds rather than, or at the very least to complement those of town, county, and/or state lines.

> The Rhode Island Rivers Council, which was established by law by the General Assembly...has a number of major mandates, one of which is to...designate...watershed councils for each of the state's watersheds.... There are very specific, fairly strict guidelines concerning what they have to do, and what they have to demonstrate in order to be designated. And we were the first watershed council designated. We were designated last year.
>
> Basically, the mission of the watershed councils is to speak for the rivers, for the watersheds before any and all appropriate forums at which a voice for the rivers and the watersheds is required, i.e., represent the watershed in major federal actions or major state actions, major municipal actions.
>
> There are a fairly wide range of activities that watershed councils are charged with. And they fall generally speaking into the following general areas: conservation and preservation (resources), maintenance (preservation and maintenance of the water quality), a variety of public education and outreach programs concerning the natural resources of the watershed, the rivers and the watershed. (WPWA member, 2001)

Guiding Philosophy and Strategic Approach. On the front page of the group's brochure, the overarching mission is expressed – "To promote and protect the integrity of the lands and waters of the Wood-Pawcatuck Watershed (WPWA brochure, undated)." This sense of purpose is shared by its members, who recognize the value of what currently exists and who do not want to make the mistake of waiting until something irreversible happens. "The idea is that we have resources here that are in good condition, that are really valuable to the community and so, you know, rather than waiting until something happens to destroy these resources, why don't we protect them? So, it's proaction instead of reaction (WPWA member, 2001)."

WPWA works towards achieving its mission through four central program foci, which include water quality protection, watershed education/recreation, municipal outreach, and river stewardship.

Water quality protection is achieved by monitoring programs, mainly run in conjunction with or through the University of Rhode Island Cooperative Extension's Watershed Watch. Numerous volunteers throughout the watershed conduct water quality tests on a regular basis at various pond, impoundment, river, stream, and estuary sites. This data is collected and studied longitudinally, and shared with state agencies to aid in a variety of decision-making.

Because it is such a significant component of WPWA's work, it is categorized as a separate focus area. However, volunteer water quality monitoring is essentially as much about stewardship as those activities described below under "river stewardship."

> One of the main things that I see as a value of this Association is to provide opportunities to people to be stewards of their environment. And water quality monitoring is a big part of that. As people monitor their water body, their pond or their stream, they see it on a regular basis, they get to feel an understanding of it. (WPWA member, 2001)

A second core program focus area for WPWA is watershed education/recreation. This takes a variety of forms, including adult education, children's programs, workshops, and special events, and will be detailed in the next section.

The third core program is municipal outreach. Here, WPWA takes the lead in issues that cross town boundaries and affect the region as a whole. To do this, WPWA sits on a number of boards and committees along with local, state,

regional and federal agencies that have a stake in the resources of the watershed. WPWA also works within towns by way of members and staff that hold various municipal positions.

The fourth core program focus is river stewardship. The WPWA approach to stewardship is, again, one of proaction rather than reaction.

> The Association has consistently strived to foster a sense of 'caring for the place' in the hearts and minds of residents and users. Although the watershed remains a relatively undeveloped ecosystem, the threat of poorly planned development is mounting rapidly due to current trends in the region for development as a major tourist destination. It is increasingly important to carefully consider land use change proposals, and to become even more diligent in the process of molding the future land use mosaic within the watershed. (WPWA, undated, pp. 1-2)

While it might be argued that this sense of stewardship pervades all of WPWA's work and is a philosophy espoused by its members in all of the activities in which they are engaged, it is more specifically defined by the group in terms of certain activities. These include 1) river corridor protection, or assisting towns in "planning strategies for riparian land protection," 2) shoreline conservation, which includes helping landowners to "find agencies that accept land for conservation easements to protect the shoreline in perpetuity," and 3) river restoration, which includes annual river cleanups, river access improvement projects, and river habitat assessments (WPWA brochure, undated).

Through such action, one develops a greater knowledge of and appreciation for one's own place, a commitment to maintaining a healthy ecosystem.

> It's in our mission statement..."to promote and protect the integrity of the lands and waters of the Pawcatuck

> Watershed."...So, that's part of the definition of stewardship right there, is basically to make people feel a responsibility towards the natural resources in their own neighborhood, in their own community, rather than just, you know, in the rainforest and something far away that's actually nebulous. (WPWA member, 2001)

All of this is approached through quiet advocacy that seeks to build bridges between residents, local and state government officials, and various resource user groups towards a common understanding of the need to protect the watershed.

> Mediation and facilitation are generally the processes through which WPWA addresses the often volatile issues of environmental degradation and development in the watershed. It is the philosophy of WPWA that more can be accomplished through collaboration and cooperation than through confrontation. WPWA has a long history of working with municipalities, private landowners, businesses, and industries to find solutions to environmental issues of common concern. (WPWA, undated, pp. 2-3)

This advocacy, with its intent of reaching all who live in and/or use the resources of the watershed, is supported by the group's gentle reminder that "what happens along the banks of the rivers, the streams, the ponds, and the underground aquifers that feed into them concerns us all (WPWA brochure, undated)."

Public Education and Outreach. Education is one of four core foci of WPWA. In addition to regular publication of its newsletter, *Watershed*, along with hiking and canoeing guides, it is broadly defined to include four subcategories, which are 1) various special events, 2) walks, talks, and workshops, 3) adult education, and 4) children's programs.

Special river events are used as a means to educate the general public and key selected target audiences who might not otherwise be reached through fun activities that simultaneously seek to educate and raise awareness of issues affecting the watershed. These include canoe trips, River Day events, Source to Sea multi-day trips, river cleanups, trout season Opening Day, and the Legislator's Canoe. "When I get people out on the river, it's an opportunity to teach, it's an opportunity for them to learn. And, that's really been pretty successful (WPWA member, 2001)." This is a way not only to reach a general audience of recreational users, but also to reach specific user groups such as fishermen, and to foster closer ties to strategically important target groups by, for example, organizing a canoe trip for state legislators.

Walks, Talks and Workshops includes "naturalist programs to explore watershed lands, trails, and wildlife; recreational programs and instructions (WPWA brochure, undated)." The focus here is again on fun, outdoor activity that concurrently provides an opportunity to teach participants about the watershed and raise awareness of issues effecting it. These activities are open to general audiences and are ongoing.

Adult Education has taken the form of "homeowner workshops; presentations of local, regional and global issues by area experts (WPWA brochure, undated)." This has thus far been the least successful of WPWA's educational initiatives. Although they have offered a variety of intriguing lectures, attendance has been poor. "People are so busy. We all have a lot on our plates. And so, it's got to be something that's somebody's priority or somebody's

really interested in, in order to get them to devote the time to it (WPWA member, 2001)."

Interestingly, not only have WPWA's Children's Programs been successful, but they are also seen as a way of reaching adults. "Direct education programs of either working with students or working with teachers has the ripple effect of, the kids will go home, talk to the parents. Because a lot of kids that I'm working with are in elementary and middle school, so they still talk to their parents. So the parents get informed indirectly, through the students (WPWA member, 2001)."

This is reinforced by an area teacher who has worked in partnership with WPWA on offering educational programs on the watershed to students. "Where the Wood Pawcatuck finds something that works well, or has some valuable information that they would like to disseminate, they could, they in fact do give some of that stuff to me, give me information, and pamphlets, and what not. And then I can take that pertinent, real time information and get that valuable information to my students, which hopefully in turn gets that information to some of their parents (WPWA member, 2001)."

In addition to direct, in-school educational offerings for students, Children's Programs take the form of workshops, fishing instruction, and field explorations (WPWA brochure, undated). Further, WPWA strives to expand their reach by instructing a 3-credit, graduate level course for teachers on the AWEsome! Curriculum, a watershed curriculum developed by the Southern Rhode Island Conservation District, WPWA, and URI Cooperative Extension.

Finally, they recently had an initiative to engage high school students in out of classroom, hands-on research that could be used by town officials in decision-making.

> We've been trying to involve community as much as possible in working towards the protection of resources. [One of the things that] we're trying to involve community in is trying to involve high school students in doing community assessments…. We've developed it into three aspects of community assessment. One is well water assessment/protection, where they would go to wellhead sites, like public wellhead sites, and look at the land use right around there, and just kind of update what that land use is so that the town could make better decisions on it. Another one is to look at the recreational aspects, and another one is just to look at the defining features of the community, and to make kind of a tour, in PowerPoint of the community…. I want high school students to be doing something of direct benefit to the community. (WPWA member, 2001)

It is worth noting that this initiative evolved through direct solicitation of high schools, an indicator of the level of proactive effort of WPWA in working towards its educational goals. While this effort is no longer ongoing, WPWA continues to work with high school students through community service programs, scouting, and other youth groups.

Beyond the four formally defined program foci, education takes at least one additional form. This entails the efforts of WPWA to work directly with representatives of local government to raise awareness of watershed issues. "We're working more and more with town officials…to go out and do presentations to the town councils and conservation commissions and stuff like that. Teaching them about what some of the issues have been concerning water quality and water quantity, and what programs are going on right now in the

community, and what the towns could be doing, so, kind of a direct outreach (WPWA member, 2001)."

As with the Salt Ponds Coalition, there is a recognition of the need for ongoing public education in a variety of formats, even while acknowledging that a large number of people have yet to be reached. Again, simply making the effort is half the battle, and this effort must continue unwaveringly.

> I think that in a very general sense that there is never enough education. I think that no matter how hard you try and how hard you work at it, you're never going to do enough in an area like this, that is to say in a field like this (not in a geographical area). Because the need for educating the public concerning the advantages of resource conservation, of proper environmental management, of proper development, smart development, consistent with resource conservation, there is a continuing, never diminishing need to educate the public concerning the important issues in these fields, and to never, never back away from that. Because you can't let the issues go. You can't let the public forget.
>
> Because the growth in our area, in South County, is the fastest of the state. And we have some of the most pristine environments still available in Rhode Island. And we have to make sure that people understand what happens to the environment when various types of development occur, and the kinds of impacts on the environment that flow from the various levels of development, the types of development. So, we should never back away, we should never go silent, and we should always continue to talk about these things, to bring these things before public notice. And to ensure that the public, number one, understands the issues, and number two has enough information to make decisions about these issues, and number three, to arm the public when necessary to take an active position. So, public education is a never ceasing, always continuing, ongoing thing. (WPWA member, 2001)

CHAPTER 6

PATTERNS/PROCESSES AND DYNAMICS OF INDIVIDUAL INVOLVEMENT IN COMMUNITY-BASED ENVIRONMENTAL STEWARDSHIP

Introduction

When an individual makes a commitment to devote a significant portion of his/her time, energy and passion to contribute to the work of an organization dedicated to community-based environmental stewardship, a number of important dynamics are at work. These dynamics are defined for each individual by certain patterns or processes. These patterns/processes tend to repeat themselves to a greater or lesser extent among individuals, within and across community-based environmental stewardship groups.

One of these dynamics is the reason(s) individuals give for initially becoming involved. Related to this, but of necessity a separate subject of analysis, is the reason(s) individuals give for continuing, or sustaining their involvement over time. A third dynamic is the process or processes of ongoing learning in which stewards engage in order to be effective. Fourth is the process or processes of meaning perspective transformation through which individuals go as a result of their engagement in this work.

Beyond these dynamics of individual involvement, at least two additional dynamics are important to mention. First, to what extent does the organization contribute directly to community building in the region in which it is located? Second, are there discernible patterns of group dynamics that have the potential to influence the group's effectiveness? These dynamics, when exploring the nature

of individual stewardship, are worthy of comment because of their potential to encourage or discourage the ongoing involvement of individual members. They will be explored in Chapter Six.

Through a careful discussion of the responses of the thirty participants in this study to interview questions concerning these four dynamics of individual involvement, dynamics of community building, and group dynamics, the numerous patterns/processes potentially arising from each will be explored. All of this has the potential to inform curriculum development for stewardship educators intent on expanding the involvement of community members in the work of their organizations.

It should be noted at the outset that much variance was evident in participant responses to interview questions concerning these dynamics. Categories of response, which are the unit through which patterns/processes will be named and explored, emerged from a careful review of interview transcripts. While some of these emergent categories elicited responses from a number of participants, others might have occurred as infrequently as once. In addition, some categories yielded responses only from participants in one group, while others yielded responses across all three groups.

Finally, it should again be stressed that no attempt will be made to generalize the findings of this study to other groups. It is a qualitative study, and it is our contention that its findings, whether discussing response categories with multiple responses across organizations, or response categories with a single response from one individual, are worthy of comment. Stewardship educators

have much that could potentially inform their work either way, as each of the categories to be discussed might arise from the dynamics present among participants in their community-based stewardship initiatives. A summary of the findings on individual dynamics is displayed in Table Two on the following page.

Patterns of Initial Involvement

Anger. Some of the individuals engaged in HRI's work expressed a palpable feeling of either betrayal or injustice towards General Electric for their pollution of the Housatonic River and its environs.

> My mother in law owned one of the original properties that was found to be contaminated due to this whistle blowing process. So, she received a letter in the mail saying, "We'd like to test your property," which she showed to us, because she was elderly and didn't understand those things at that point. And that's when we were alerted. So, we started doing research on what PCBs were.... And, you know, we were basically outraged to find that my mother in law had been living, and my husband grew up on property with chemical contamination on it and nobody had said anything. Even though knowledge had been, you know,General Electric had knowledge of it for, you know, twenty or forty, fifty, sixty years. (HRI member, 2001)

This anger extends to state and federal government agencies in one case, stemming from a sense that one's voice has been disregarded by decision-makers.

> The thing that really frustrated me and probably sent me off on this lifelong mission has been that when we got our results, we both approached the Federal and State authorities and General Electric, and got a cold shoulder from everybody. And the reason why was because they were reluctant to trust our data because we were undergraduates. And, even though we had a couple of graduate students and an eminent Doctor of Microbiology that was overseeing everything that we did, for some reason they took the attitude that, you know, you young whippersnappers can't be right. And that really pissed me off to the point where, we had worked two years on it, and then to be ignored, by everyone was kind of frustrating.

Patterns of Individual Stewardship	H	S	W	Total
Patterns of Initial Involvement				
Anger	4			4
Concern for Future Generations		1		1
Critical Incident/Sense of Alarm	2	2	1	5
Deep Love of Place	3	2	3	8
Desire to Take Action	2	1	2	5
Friendship/Relationship to Someone	1		6	7
Natural Resource Protection		2	3	5
Self-Interest	3	2	4	9
Sense of Filling a Pre-Existing Void	2			2
Social Concern	1			1
Patterns of Sustained Involvement	**H**	**S**	**W**	**Total**
Civil Society/Activism	9	5	1	15
Concern for Future Generations	1	3	2	6
Deep Love of Place	5	2	2	9
Desire to Take Action	3		1	4
Flexible Schedule	1			1
Natural Resource Protection	1	2	2	5
Ongoing Connection with Others	2	2	1	5
Ongoing Need/Sense of Responsibility	2	6	3	11
Personal Interest	2		2	4
Sense of Accomplishment	4	3		7
Patterns of Ongoing Learning	**H**	**S**	**W**	**Total**
Accepting/Embracing Ongoing Change	1			1
Drawing from Past Experience	1	2	3	6
Experience-based, Incremental Learning	3	3	2	8
Formal Class Attendance		1	3	4
Self-Directed Learning	9	4	3	16
Support of Allied Experts	3	5	3	11
Patterns of Transformation	**H**	**S**	**W**	**Total**
Acknowledging Complexity	3			3
Disillusionment	6		1	7
Incremental	1	4		5
Moving Beyond Disillusionment	1			1
Personal Growth	1	3	6	10
Sense of Accomplishment	1	1		2
No Transformation		2	3	5

Table 3: Summary of Individual Dynamics of Stewardship

> And then, you know, a year later, is when all the hoopla started about EPA banned PCBs, and lo and behold, here's an article in our local paper saying, you know, "EPA Finds PCBs in the Housatonic." You know, so it was kind of like, that whole scenario, that got me crazy and to realizing that, you know, even sometimes when you have good data, it still can be ignored, depending upon, I guess, your stature, you know? So, that kind of set me off then, at that point in my life. (HRI member, 2001)

While this anger towards or sense of being ignored by government agencies occurred frequently among HRI members later on in the process of their involvement, only once was it mentioned as a spur to initial involvement.

Concern for Future Generations. While only one person gave this as a reason for initial involvement, it was expressed repeatedly as a reason for sustained involvement. Both men and women mentioned this. While the concept of intergenerational equity has been written about by resource economists, environmental justice advocates, and others in recent years, this desire to leave the world a better place for one's children, it may also be argued, is a fundamental human emotion. "I have a seven and a nine year old living here. I'd like to leave the place better when I leave than when I got here. That's what my mother taught me, you know. You go to some, I do a job, when I leave the job, it's better when I leave than when I got there (HRI member, 2001)."

Critical Incident/Sense of Alarm. Individuals from each organization stressed the influence of a specific moment in time. This moment in time may take the form of experiencing a critical incident that moved them to action.

> We came down and, with the Rand McNally map we said, "Oh, here's a nice place along the coastline." And we stopped there on the way home. So we did, and we fell in love with the area. The

> ocean is so clean here.... We had a summer home built here. We finished the inside.
>
> But the thing is, two years after we were here, there was a proposal to build a nuclear power plant, okay, in Ninigret Park.... People got together and said, "We have to do something about this nuclear power plant. We don't want it." The power plant people had towers erected to study, make studies on wind directions and velocities and, an impact study, they were doing. And we were saying, "Hey, wait a minute, what are you doing? I mean, let's take it easy." So, they said, "Oh, no. We've got the okay for this. We've got the okay for that."
>
> And that's when we got involved.... We came up here for five years, and we didn't play in the summertime, we worked. But, that's why we have Ninigret Park now, and we have the wildlife preserve there. It's because of the Concerned Citizens of Rhode Island. (SPC member, 2001)

Alternatively, this specific moment may arise out of a sense of alarm over a situation that they had encountered, in which they felt that something was simply not right, which acted as a trigger.

> What tends to happen, why people get involved, you know, is a flash point.... It's a moment where suddenly, your ordinary life becomes, gets injected with, you know, this either defensive or offensive or aggressive or, sort of, illuminating piece of information, combined with a sense of self-protection that makes you suddenly commit a huge amount of resources and energy to a project that other people have let slip by them for years or decades or whatever.
>
> And, that flash point, I think is, you know, it's like, after that initial flash point, then whoever got hit then tries to figure out how to get other people involved, and then a process of community education, and information and all the stuff we were talking about.
>
> But, the true grassroots, activist movement, I think, you'll find, overwhelmingly is initiated from within by that, sort of, illuminating moment of, "Holy shit, this is not, this is going on and I just can't hang by any more. I've got to do something here." (HRI member, 2001)

Deep Love of Place. For a number of individuals, a strong feeling of connection with the place they call home is enough to commit to the work of an environmental stewardship group. Commitment stemming from this love of place occurs whether there is a direct threat of ecosystem damage to that place, the perception of a potential threat, or a desire to maintain a high existing level of environmental quality. Selected individuals in all three of the groups offered this as a reason for their initial involvement. A sense of stewardship was expressed metaphorically in a couple of cases.

> Within my household, we are arch-conservationists and environmentalists, and we consider ourselves accountable to the natural resources that we caretake.... We take our responsibilities very seriously. And we expect others to do the same.
>
> And we're devoted to the river. We consider the river...to be the blood vessels of the earth, and once you start clogging them, you know what happens. (HRI member, 2001)

When one becomes familiar with the natural landscape of the place one calls home, there is the potential to see that place in an entirely different light than previously.

> We live in the area, have now for fifteen years, and...it took us three years after living here to really discover the rivers and begin to canoe them. And, we were just amazed at how different our sense of place was, beginning to know the rivers. And, so we realized that that's really the blood of this area is those rivers. And people who don't realize that are really missing a lot. (WPWA member, 2001)

This love of place, while passionately felt, may lie dormant as a spur to action for years until one hears of the efforts of others, leading to direct involvement. "I've been brought up near the river, I'm looking at it right now, I'm about 200 feet from the river. I always cared about the river, and then about

six years ago a bunch of people started cleaning up the river, and I started asking questions...and I've been really involved ever since (HRI member, 2001)."

In the end, love of place can act as a steady source of renewable energy, fueling the ongoing commitment of community-based environmental stewards to carry on with their work in spite of obstacles, setbacks, or other disappointments. "[SPC is] the most educated and concerned group. Not necessarily a reactionary, a knee jerk reaction, not in my backyard type people, but rather professionals in various occupations [that] have come together with a mutual concern for the ponds (SPC member, 2001)."

Desire to Take Action. For some, the initial motivation to get involved was expressed as a sense that they could no longer be passive in their relationship to their place and the decisions being made affecting it. This is distinct from other categories of initial involvement in that it is about agency, born of a desire to contribute and a feeling that one's efforts can make a difference.

> I live on the banks of the Housatonic.... As a kid, the river was unswimmable. It was filthy. And I remember asking my parents, you know, "Why can't I swim in the river?" and they said, "Well, it's dirty, but they're cleaning it up." And, you know, about ten years ago, whenever it was, I was looking down at the river. And I'm a kayaker and a canoeist, I like the outdoor stuff. And I'm looking at the river, and I realized that the "they" was whoever embraced the project.... It's a self-appointed project sometimes. So the "they" became me. (HRI member, 2001)

A desire to take action may also originate from a sense of gratitude. "I have always felt that I'm fortunate to live in a beautiful place.... I was pleased to find something outside of the house that I could devote myself to (SPC member, 2001)."

Friendship/Relationship to Someone Already Involved. One person in HRI expressed this as a motivator, along with several people in WPWA. Certainly, the social dynamics governing stewardship groups are important. It is logical that individuals that may have already been amenable to the mission of an organization, but perhaps not quite ready to become involved, might take the leap at the urging of or having been inspired by friends and/or colleagues. "I thought their mission and all was worthy. The Executive Director and other members of the board, when I first got engaged, were people that I trusted, respected, and thought would be fun and enjoyable to work with (WPWA member, 2001)."

Natural Resource Preservation/Protection. For some, the desire to get involved is expressed in practical terms, in contrast to those who speak passionately of their love of the place they call home. While this certainly does not preclude such passionate love of place, it does not appear to be the fundamental motivation for them. The spur to involvement is not about protecting a sacred place, but about protecting drinking water supplies, or preserving the water quality and habitats of a pond. This does not necessarily imply a direct economic or use interest. Nevertheless, there is a sense that, if damaged permanently or for a long period of time, no one benefits, now or in the future.

Further, a damaged resource base may even result in negative economic and/or human health consequences. "I think we have to work on protecting the rivers in the state and this country. We have to protect them from pollutants, we have to see that they're not mistreated. I just think that if we want to have a good

place to go to somebody should be out there protecting them, or working to improve them (WPWA member, 2001)."

Self-Interest. While there is an old argument among psychologists that all human actions are motivated by self-interest, this clearly depends on the parameters within which the term is defined. Responses in this category are woven together by the sense they give that the individual is taking advantage of the opportunity for something other than, or in addition to stewardship. Broadly defined, this could include direct consequences to one's health and financial well-being.

> Sometimes it is...economic.... Someone feels that the forest company is going to come in and clear cut the land next to theirs, and they've loved looking at their land all these years, and it's suddenly going to be a naked piece of rubble. And, they loved walking that land, and suddenly, you know, that's a moment. Okay. Someone's going to put in a gravel pit, someone's going to put in an incinerator. Someone's going to, you know, so it is a combination of health and economic often in cases.
>
> Because those are the things that motivate people, self-interest, my health, my money, you know, my children. And, those are the points where you're most successful at getting other people to embrace the vision that you have, is if you can show them how their health, their money, their children, their jobs, are going to be affected negatively by the continuation of whatever it is you're trying to put them into. And, 'cause that's what makes us all move, those issues. (HRI member, 2001)

However, it could also come down to an opportunity to pursue a personal goal in a way that might not have otherwise been available. "I approached it a little differently than I think the other board members in that I was sort of trained in this area of science, and so I approached it as a scientific problem as much as a

social issue, if you will. So my interests were a little different, in that this represented to me an option for professional development (HRI member, 2001)."

Sense of Filling a Preexisting Void. A couple of individuals expressed their motivation for initial involvement as stemming at least in part from a sense that appropriate advocacy and action was entirely lacking, and that they needed to step into a situation to begin to remedy it. This feeling of filling a pre-existing void might occur before a stewardship group has come together, as in the case of HRI. "There really wasn't a constituency, there wasn't anybody to really do anything about anything (HRI member, 2001)."

Alternatively, this might be expressed as a feeling that one's voice will add a unique dimension to the discourse on issues affecting one's environment, potentially moving this discourse in a more positive direction on behalf of one's place.

> There're a lot of organizations that have a lot of say as to what happens to the salt ponds. Obviously, you've got individuals that live here, you've got the various local governments, you've got the state government, the federal government, and all sorts of agencies. Everybody has something to say about it. And, I think, what motivates me is to make sure that some moderation and common sense wins out. (SPC member, 2001)

Social Concern. One individual expressed a direct concern for the health and wellbeing of community members as the initial motivator. This certainly does not preclude a concern for the environment or an understanding of how the two are linked. It does, however, reveal an admirable, open expression of a belief that people are of paramount importance.

> I came to HRI as a result of working on a film. And in the process of that I interviewed some of the people who had worked at the

> plant. And so I sort of came to it very concerned about what had happened to the people who had worked for GE and how they had been exposed to PCBs.... I was actually shocked and appalled at what had happened to the GE workers. And, I really, you know, on one level, because they had shared their stories with me, I felt like I owed them to get involved in trying to get their story out to the general public, and to sort of try to get them taken care of. Which I haven't really succeeded in, but I did in fact make a commitment to continue and learn as much as I could about GE and PCBs and channel that into HRI. (HRI member, 2001)

Patterns of Sustained Involvement

While discerning the initial reasons for people's involvement in community-based environmental stewardship groups is important, it serves little purpose if the trigger does not lead to sustained engagement. Successful efforts towards maintaining or improving the quality of one's environment require long-term commitment from dedicated, connected individuals. It is to these reasons that we now turn.

Not surprisingly, there was some overlap in reasons given for initial involvement and reasons for sustained involvement. Responses that were either expressed in the same terms or had the same essential meaning have been categorized similarly to responses given for initial involvement. These categories of similar response will be noted without further comment in this section, and they include "Concern for Future Generations," "Deep Love of Place," "Desire to Take Action," and "Natural Resource Preservation/Protection."

Civil Society/Activism/Advocacy. The more carefully one examines the work of community-based environmental stewardship groups, the more one gets an overwhelming sense of the necessity of their efforts on behalf of their ecosystems. Even assuming the best intentions of local, state, and federal

government agencies and other entities, these groups are frequently under-funded, and overburdened.

> I think it's particularly true that unless there's public pressure, often times state and federal agencies have no will to proceed with anything other than a snail's pace at accomplishing their tasks, because usually, they're overworked, and understaffed (especially in the environmental area). And, so wherever the public pressure's coming from tends to be, that's the squeaky wheel that gets the attention, and all of the other things that are on the desk get pushed to the bottom. (HRI member, 2001)

In worst case scenarios, they may be working directly against the interests of community members or ignoring their voices. At the very least, there may be a perception that this is the case, which can lead to profound mistrust. "All these questions we keep putting to the state and everything, you know, we don't get these answers to, and it's just, the more we questioned, the less I trusted them. So, and the less I trusted them, the more we got involved, the more I've been educated on this (HRI member, 2001)."

Further, it is virtually impossible to imagine a situation in which even the most passionate, committed, creative individual could accomplish much on his or her own, without sharing a common, sustained sense of purpose with at the very least a few partners. This is why community-based environmental stewardship groups, as members of the civil society, are so important.

> Had it not been...for me *and* the HRI, not one home in Pittsfield would have been disclosed to be contaminated. That's a fact, believe me...I used to get phone calls from...people I didn't even know, telling me where it was dumped, almost to the year. So we would turn all that information over and finally they started believing us. It was really due to...HRI, believe me, 'cause they had a little clout, and it was more than just one person like myself trying to do something, you know? It was, it worked out great,

> they've accomplished quite a bit. (HRI member, 2001) (italics added)

This sense of activism or advocacy to complement or counter the efforts of government is expressed frequently as a reason for sustained involvement.

> Without…the threat of Superfund and us rowdy people from Lakewood…there would have been no so called Consent Decree, because I don't believe our political leaders backed us up much on this. They would like to see us go away, because people like me keep coming up with toxic dumps, waste dumps, and we're like a thorn in their sides. Because we keep finding stuff, and, because we know about stuff, and we keep finding stuff, and a lot of times they won't believe us. It's like a war. Even the state, sometimes I wonder if they're on our side, as well as the EPA, the government, you know, this is bigger than, this is big. (HRI member, 2001)

In the case of HRI, this sense of engaging in the work of civil society has taken the form of acting as a persistent watchdog to monitor the actions of GE, recognizing that the actions of government agencies are not enough.

> The testing of the ground right now, that's being done by General Electric. The EPA, the DEP approve it, the plan. And then General Electric does the testing. They hire the people, and they report back. I'll tell you, I've caught them cheating, I've caught them doing things that aren't right. I've caught them leaving the test things out in the sun all day. (HRI member, 2001)

Persistence is also required to convince inert or unbelieving government agencies of one's case. "We have watched, all through the whole process where EPA tells us one thing and we have to keep harping for another year, year and a half, until they finally investigate. And, up to this point in time, I cannot think of one thing that we've turned in that didn't come to be true (HRI member, 2001)."

When a community-based group like HRI experiences an ongoing pattern of disregard for its findings from government agencies, some of its members may

get to the point of feeling that their efforts as watchdogs must continue indefinitely.

> There is the history of having called to people's attention problems and incidents as of a contamination, where they have been denied, again and again, by both sides, and where HRI proved to be right, again and again and again and again. And so, with the long history of over five to six years of this, there is a sense that, just because there's a Consent Decree, it's not over. There's a worry and a tendency now that the cleanup crew, now that the big deal guys have gone back to doing what they do, and the job of implementing the cleanup has been left to the cleanup division, there is a gnawing concern, to a greater or lesser degree, on many people's part, that the only way to get a good cleanup is to keep pushing. (HRI member, 2001)

Yet, in the end, the persistence in one's efforts, in the belief that one's group is providing a valuable, even necessary service unavailable or insufficient through formal government efforts, is in and of itself worthwhile. Further, there is the potential that, by continuing these efforts, while simultaneously advocating on their behalf to government agencies, they will eventually be recognized, valued, and even used in decision-making. "They were measuring the water quality for a number of years. And we had all this data, and it didn't seem like anybody was listening to our results, and looking at our results and saying, 'We have to take some action.' (SPC member, 2001)."

However, with time, persistence, and an ongoing dialogue, there is the potential for change. "The DEM, the way they perform certain tests, and the way we perform tests, the criteria that we use, it may vary. And because of that, they may not accept our data. But the point is that they're coming more and more to realize that our data and their data is correlating quite well, even though we use different tests, techniques (SPC member, 2001)."

In addition to the various ways in which community-based group members engage in the work of civil society as a reason for sustained involvement, there is at least one additional way, beyond acting as a complement or a counter to government, that they can play a critical role. This is in acting as a mediator *between* different levels of government.

> When we first started, the EPA and the DEP weren't even talking to each other. They didn't know how to go about doing this, 'cause they both had laws, of course, which effectively, or supposedly dealt with hazardous waste disposal. So they couldn't figure out how to talk to each other, so we facilitated that, their getting together, I think.... I think that's one of our great accomplishments, basically, getting the state and federal agencies off their butts and doing something. So, I would put that at really sort of the top of what we did. (HRI member, 2001)

Finally, one additional dynamic potentially present is a sense that one's entire region is largely ignored by state agencies. "One of the ironies of Rhode Island is, for some reason, this part of Rhode Island doesn't really count. The main emphasis of so much is say, north of Point Judith. And, South County and the coastal ponds has been a poor relative forever, taken for granted (SPC member, 2001)."

Flexible Schedules. This is likely not a primary motivator for ongoing commitment in stewardship, but it makes one's decision to continue over the long term considerably easier and in itself can contribute to the level of one's active involvement.

> It's a fairly diverse group of people, some of whom have the time, so that they're not being squeezed completely dry by the demands of these long-ranging activities, measured in years instead of days. And, the pace of this, aside from what our director has to go through, tends to really be dictated from outside as well as inside. In other words, my professional life gets real busy for awhile, I

> tend to be a little less active for awhile. When I have the time, I get more involved in, either creating projects or working on existing ones. And the same is true for, I think, a number of other people. (HRI member, 2001)

Ongoing Connection with Others. Individuals from all three groups expressed a feeling that they were frequently inspired and recharged by ongoing interaction with others involved in the organization. There is a sense that they are going through something together that is enormously important, that they can make a difference, and that the particular chemistry of their collaboration greatly contributes to their effectiveness. "I got energized by everybody who was part of HRI at the beginning. Everybody seemed to really, there was just a, which is, you know primarily a good portion of our Board of Directors right now. It just seemed to be a great mix of people who really had the fever and the guts to want to take something on (HRI member, 2001)."

Part of this dynamic stems from a sort of mutual respect evolving from the process of working together on an issue, learning from each other, and an admiration for one's colleagues' abilities to get things done. "I have a lot of respect for a few of the board members who just kind of put their nose to it and did it, and they dragged a lot of us along with them. So, I think the importance of a truly committed, passionate few, I think, can be underestimated (HRI, 2001)."

In addition to this connection with colleagues, there is the potential that one's work will be noticed, respected, and referenced by kindred spirits from other locales.

> I had the opportunity to go to the Water Quality Conference in Annapolis during this time period. And it was just awesome to hear about all the different activities that were going on around the

> United States. The Salt Pond Watchers project, we've been told, was the very first volunteer project of that nature, environmentally.... When we went to the Water Quality Conference, it was, "Oh, you're part of the Salt Pond Watchers." Well, you know, and they had lots of questions on how we were doing things. (SPC member, 2001)

Ongoing Need/Sense of Responsibility. This category of response comes closest to a direct definition of stewardship in practice. Stewardship, above all, is about taking responsibility for one's environment. This implies a willingness to act indefinitely as a caretaker. "This is the place we live in, and we want to continue to protect what it offers us. That's just part of our responsibility if we're going to live in a place, to take care of it and contribute toward its health (WPWA member, 2001)."

There is a need to undertake continuous vigilance, even when one's ecosystem is not directly threatened either by development or pollution. "What the Salt Ponds Coalition has is a real solid group of folks that are genuinely concerned about what is going on. And these people will learn, you know, and work with you. And when you have folks like the Salt Ponds Coalition and the folks that make this up, basically they're in it for the long run, to try to do a better thing, and as I said, from all different backgrounds (SPC member, 2001)."

Yet in addition, a concern for social justice can act as a motivator for ongoing engagement. One may have little hope of ever completely resolving an overwhelming problem, but one's sense of obligation encourages further action.

> When you discover injustice, you have two choices. You can say, "This is too much, I can't deal with it." Or you can try the best you can to deal with it and confront it, understand it and try and reverse it. It's a very long and difficult process. And, I guess what keeps me going is the sense that we're not done. There's still work

> that remains to be done and I feel if I stop now I would be sort of be betraying what I've learned. (HRI member, 2001)

Personal Interest. When one makes a long-term commitment to devote one's time and energy to a cause, it never hurts if one was intrigued by the topic at hand to begin with. Whether one is interested in science and water quality testing procedures, or whether one has spent one's leisure time reading the environmental literature, a pre-existing interest can contribute much to one's desire to participate in stewardship. "Environmental issues have always been very near and dear to me. It's just been part of who I am. I never had one specific issue that I, you know, worked on, as intensely, but I was just interested in the whole picture (HRI member, 2001)."

Also, one's personal interest can be expressed as a desire to contribute to the growth and development of the organization itself. In this sense, although it may be implied that one is greatly concerned about the environmental issues driving the group's work, the spark for continued involvement may have as much to do with setting organizational goals and a wish to play an active role in meeting them.

> There was the challenge of trying to take a relatively small organization and see if you could build it to be more effective and expand its role a little bit. From just looking at water quality to looking really at some of the larger issues that are resulting in degraded water quality and some of the other issues that the Association takes to heart. Looking more closely at the issue of development and seeing could you expand that sphere of influence a little bit. (WPWA member, 2001)

Sense of Accomplishment. It is not unreasonable to think that even the most committed environmental stewards might suffer from burnout and reach a

decision to step back from their advocacy if they felt that none of an organization's goals were being met. Yet despite the obstacles these groups have faced, whether from corporate negligence, government inertia, or even organized resistance to their work, it is remarkable how much does get accomplished. Individuals take an understandable pride in these accomplishments, and achievement of benchmarks, small or large, can have a significant influence on one's decision to continue working on the issues confronting them.

> You get into these things, and you find out you're making some progress, and you want to make some more, and so it's, the challenge never goes away, it takes a long time to get action.... You know, it's a, there's a lot of reward to it when it comes. Sometimes you wonder if you're ever, if anything's ever going to happen, and then when it does, you say, "Wow, that was great." And then you get this kind of feeling of accomplishment when you put something together, you put a project together that works and makes a difference. (SPC member, 2001)

Such a measurable sense of accomplishment has the potential to steer one through challenging times and difficult turning points, and can even be felt collectively.

> We have lost a couple of board members, because of other commitments, because they felt they had achieved much of what they had hoped to initially, and that there's not as much left to do. Or, people were too radical, or not radical enough, I mean, there are all kinds of reasons why you lose people, but I think that overall, we're all fighters. We all believe in what we're doing, and we've been able to achieve enough to keep us going. (HRI member, 2001)

Sometimes, there is a need to step back and reflect on what one has accomplished, as it may not manifest itself as the achievement of a major goal. However, success can be measured not only in terms of reaching major goals, but

also in small steps, recognizing forward progress, and understanding that one is moving in the right direction.

> There are a lot of small things that happen, and maybe when you put them all together, they make a big difference. Because you're taking this thing in little nibbles, and.... One of them is that a number of towns here have adopted what are called Wastewater Management Ordinances, which mandate that people do inspections of their septic systems, which are one of the reasons why the ponds are so dirty. And those have happened in the last three or four years. Implementation of Wastewater Management Ordinances, and that's really what you're after from every town, and we've managed to get that out of three or four towns down here now.... That's a milestone that says your years of water quality monitoring and education and advocacy have begun to take hold. (SPC member, 2001)

Patterns of Ongoing Learning

Learning takes many forms and is embraced by different actors in different ways. A central theme that this research has sought to explore is the ways in which community-based environmental stewards learn in order to be effective in their advocacy and to continue to grow. Everyone is different, bringing varied life experience, professional experience, and levels and types of formal educational attainment to community stewardship processes.

Such variety inevitably leads to differing needs among individuals, in terms of both content learning and process learning. Additionally, individuals' differing life situations make inevitable the need for a range of media for learning. Yet regardless of the options available, people seek out and successfully find creative ways to learn, allowing them to contribute more effectively to stewardship. It is to these patterns and processes that we now turn.

Accepting/Embracing Ongoing Change, Struggle. In one sense, learning can be seen as a process whereby one comes to understand the very fluent nature of stewardship and advocacy. Through a recognition that conditions are continually shifting, situations constantly changing, and an ability to navigate one's emotional responses to frustrating and/or negative experiences, one can become more effective, perhaps even wiser. "It's really trying to figure out what you do with unpleasant reality, and how to find some more realistic approach to life than a certain kind of idealism. How to really learn how to basically engage in a ten to twenty year struggle. And that's a constant learning process, going through periods of just being enraged, and learning how to, what do you do with rage? (HRI member, 2001)"

Drawing from Past Experience. For some, their role in a group's stewardship efforts was more about contributing pre-existing knowledge and experience to aid in the group's work.

> I didn't really have to learn much, Mark. I told them where I thought stuff was dumped. Helping them with maps of the plant. Helping them with paperwork. There's a newspaper. The Jubilee newspaper that the GE put out, and they admitted that this stuff was bad. I have all kinds of paperwork. I drew pictures of the trucks they brought around. I just, doing a lot of it from memory, and a lot if it, the paperwork that my mother had. (HRI member, 2001)

An ability to tap into one's personal reserve of accumulated knowledge, skills and experience, however, does not automatically translate into an ability to transmit this to others. This is a skill that may only come through practice, through trial and error, and it remains an ongoing challenge.

> What I have always had as a vision in terms of the work that I do is to try to bring things down to understand what the professionals are doing. Weed out that which is theoretical and what is practical, and try to convey that message to the citizens of the state of Rhode Island.... It's kind of watering it down from the pure scientific standpoint, but as far as I'm concerned, it gets the people involved, so they can understand it.... Hopefully, I'm coming from the direction that I can be the teacher. And I think that's where I see my role in the Salt Ponds Coalition, as the teacher, to try to, you know, take thirty years of seeing it and feeling it and tasting it and conveying it to these folks. (SPC member, 2001)

Honing and improving these efforts to transmit and transfer one's knowledge and experience to others, it may be argued, is a form of ongoing learning.

Experience-based, Incremental Learning. Upon reflection, many stewards express the way that they learn as arising from the day to day activity of their stewardship. This is distinct from conscious efforts to learn specific content and/or skills, which also happens frequently and takes different forms. Fundamentally, this dynamic of learning is about allowing processes to play themselves out, learning from them, and then permitting oneself to be informed by this experience in future strategic decisions.

> You learn from your battles, be they victory or losses. If you don't, you know, you're stupid. So, I'd like to say that I'm not entirely stupid, and that I have learned something, each time we try and accomplish a component of the overall war. Sometimes the things you're learning are irrelevant or inconsequential, but sometimes they actually have some bearing on what lies ahead. (HRI member, 2001)

This kind of learning requires a steady, unflagging determination, a willingness to tough it out and never allow oneself to be overwhelmed by the enormity of the task at hand. "It's kind of like hacking through the ice, you

know? Just little by little, you learn how to do it, and you ask questions, and you get good people around you to help you wade through the process (HRI member, 2001)."

Experience-based, incremental learning is best accomplished by simply diving into the tasks at hand, which has a tendency to gather momentum. "You really get it, primarily though, by going to meetings, meeting people, doing work, filing for projects, getting involved in partnerships with other organizations, and it comes to you pretty quickly if you get, if you really get involved (SPC member, 2001)."

It can also be about learning rather mundane, but essential skills necessary to run a stewardship organization.

> How do you more effectively manage a non-profit, you know, in a more profitable fashion? How do you keep a stream of revenue coming in? How do you better bolster the general community to support that effort? How do you better write grants to try and flow money into the Association for particular projects and initiatives?
>
> The other big thing was looking and having to learn a lot about strategic planning. And, how can you better work with an Association like this, a volunteer organization to better get them managed, and managing themselves, and coming up with sort of a five-year strategic plan. (WPWA member, 2001)

Formal Class Attendance. Very few people expressed a preference for learning through any kind of formal educational offering, be it semester-long undergraduate or graduate courses, or shorter, regularly offered training opportunities. However, it is not unheard of.

> I've gone to Penn State. They would have things like trout management seminars for three or four days, and I'd go up to that. And the last three or four years, I forget how long now, I'd go up there every February for a couple of days anyway on either stream

> bank restoration or stream assessment classes or, you know, that type of thing, including trout management. I've done it with the USGS here. I've been going out to training with them on stream assessment on a couple of rivers, and that type of thing. (WPWA member, 2001)

Self-Directed Learning. As indicated in Table One, the participants in this study came from a range of educational backgrounds, including a number of different levels of attainment and a variety of concentration areas. Many had limited science backgrounds.

Others, although grounded in science, may have known little about the particular science pertinent to the issues they were addressing. Still others, scientists or otherwise, knew little about organization management, including fundraising and bookkeeping, the various roles and functions of different branches of local, state, and federal government, or about people skills necessary for negotiation and advocacy.

Remarkably, this does not seem to have stopped anyone from pressing forward with his or her work. Underlying this is a sense that what was at stake was too important to be intimidated by realms of knowledge with which one was previously unfamiliar. In order to represent the interests of a stewardship group effectively at meetings and other forums, there is a feeling that what is needed is to learn enough about issues to be able to argue one's case soundly.

> In true liberal arts fashion, I dove in and figured it out.... Go where I gotta go, get whatever information I gotta get, whatever I gotta read, find out background information on it. I mean, we all have been involved in this. In order to make coherent arguments about things, or in order to understand what's going on, and be able to find the holes in someone else's argument, or whatever, or be able to explain what's going on to other people, it's necessary to get, shall we say, up to speed. In order to get up to speed, you've

> got to go ask for stuff and you've got to read it, you've got to do the homework. It is not sufficient, in this kind of a situation, to simply lay back and take the handouts home from a meeting. There's plenty of information around. There're very few people that are willing to spend the time to learn. But it's home schooling, I can assure you. (HRI member, 2001)

If the will to learn exists, and one is committed enough to the mission of a stewardship group to press forward unintimidated by gaps in one's formal knowledge base, we live in an ideal age for ongoing self-directed learning.

> After we got involved in this, I got a computer. I've been doing a lot of reading on the Internet. I've gone from being just a guy that swings a hammer to actually being able to operate, navigate, and work at my own computer, simply because it was a had to issue, just like the PCB stuff, you know, we had to do this. So, we've had to have people educate us, do a lot, just a lot of digging. (HRI member, 2001)

While the Internet has allowed access to abundant, frequently sound information without ever having to leave one's home, there is also a more traditional way to approach self-directed learning. "I'll use the Internet to ask questions. Researching things on the Internet, I don't have as much specific luck, but I'll once in awhile pop into a library. URI, the Graduate School of Oceanography has the Pell Library, which is the holding library for all the oceanographic material in the country (SPC member, 2001)."

Again, a grounding in science hardly translates into a grounding in the particular realm of science necessary to advocate effectively for a river, watershed, or pond. "I knew nothing about PCBs when I got involved in this. I'm not a chemist, I'm a botanist. So I had to learn from scratch (HRI member, 2001)."

Even if one is formally grounded in an appropriate science base for the work at hand, understanding the roles and interrelations of state and federal government agencies can seem a daunting task and certainly may require additional self-directed learning.

> Most of the learning that I've had to do has related to learning the state institutions within Rhode Island, the different offices and agencies, the DEM, who the players are. I've just kind of done that by searching the Web, researching what DEM is all about in the legislation, enabling legislation. Researching the different divisions of DEM, and what each is responsible for and so on. So, I've just kind of done this on my own, my own research through the Web. (SPC member, 2001)

Processes of self-directed learning are not only important so that one can speak authoritatively about issues with stakeholders and government representatives at meetings, but also if one is involved in stewardship education initiatives.

> I've had to learn a lot more about hydrology and flow measurements. So, you know, things that I'm having volunteers do, in many cases I've had to learn them first.... I'm sometimes one step ahead of what I'm teaching.... It works out pretty well, actually. Because, I think I can then turn around and teach it a little bit better, knowing the difficulties that I've faced in trying to understand it, and very recently. (WPWA member, 2001)

Support of Allied Experts. As with any collaborative effort, community stewardship requires that individuals work together in creative and innovative ways. Even assuming that the active members of a community-based stewardship group are highly motivated, highly educated, creative, intelligent people who work well together, it is unlikely that they could succeed in their efforts without drawing upon reserves of social capital stretching well beyond the formal borders of the group's membership.

It is important to establish and maintain positive working relationships with others in the community, with local business owners, and with representatives of local, state, and federal government agencies. However, the experience of these three groups suggests that it is also necessary to create a pool of supportive experts, content specialists from various scientific and other related professional backgrounds, who can be contacted on an ongoing basis. These allied experts offer the groups assistance by answering questions, clarifying confusing material, and encouraging further learning among group members.

Again, the enthusiasm, let alone the willingness, of community-based environmental stewards to pursue formal learning offered through area colleges and universities, is suspect at best. Hence, the willingness of allied experts to devote their time to teaching community members is critical. It is important not only from a knowledge transfer perspective, but also from a confidence-building one. Feeling empowered through a better understanding of various processes, community members are better able to advocate on behalf of the causes they are passionate about.

> Well, like I say...the HRI would bring in experts to talk to us and talk to the people, and you learned different types of contamination, and different – everything's a tongue twister of a name, you know? But when I was, everything in front of me, and all the paperwork, and papers that I would take along with me and paper that I would take up with it, I could correspond pretty good on different names of the chemicals. Benzine and everything, you know? And, you learn all this just from being able to listen to some of the experts that were brought in, at different meetings. (HRI member, 2001)

Such collaboration between stewardship groups and allied experts can be about more than information sharing or common environmental concerns. There is certainly the possibility as well that long-term social relationships can evolve.

> We've asked a lot of questions. I've had people, you know, I've had to have people explain to me what this was, and what that was, you know, explain to me about PCBs.... We've had, you know, the chemist from SUNY, we've had her over to dinner. Just to sit down and, you know, "Hey, explain this to me." You know, and we've become friends with these people, some of them. (HRI member, 2001)

This collaboration between community groups and allied experts is important not only from a social capital perspective, but from a civil society perspective as well. Again, even assuming complete commonality of purpose between representatives of local and state government agencies, there is an understanding that these agencies are frequently understaffed and under-funded. Simply put, they can not do everything themselves. Hence, there is a need for others to work with them in raising public awareness and taking action to address issues.

> There's a lot of people who are willing to teach you a lot, because if you're willing to help them get their message across.... And it's pretty easy to get educated if you take the time. It's done by federal agencies, it's done by state agencies, it's done by the University of Rhode Island, who's superb at that kind of thing, the

> Cooperative Extensions that do outreach in the state. And so, you can get educated as quickly as you want to get educated. (SPC member, 2001)

Further, the quality of learning that takes place through this kind of collaboration should not be underestimated. "You can go to lots of courses and pay lots of money to get trained. On the other hand, if you sit down one on one, or you start working on a project with a couple of well educated partners, you can get all that education for nothing, so you tend to do the latter (SPC member, 2001)."

Finally, there is the potential for the learning that comes through this kind of collaboration to become a permanent fixture over time, for all intents and purposes, an educational medium in and of itself.

> I utilize a lot of the agencies that we have around here. The USGS (U.S. Geological Service) has been very cooperative, very helpful in doing trainings.... I've had to do a lot of learning on the job, and I've utilized professors at URI, and I've utilized state agencies, so I have a lot of resources out there. A lot of people, I've made a lot of contacts. So, I can call up somebody if I have a question. And usually, either get an answer, or get directed to where I could get answers. So, a lot of what this job has been is to develop contacts in the community and in the profession. (WPWA member, 2001)

Patterns of Transformation

Central to the dynamics that this research has sought to explore is the ways in which individuals are transformed by the processes they engage in as community-based environmental stewards. Transformation, as we are defining it here, is in line with Mezirow's concept of meaning perspective transformation.

At its core, the concept of meaning perspective transformation is about fundamental shifts in one's worldview brought about through critical reflection on

experience. When asked if their work had transformed them or changed their perspective, most participants in this study acknowledged that it had.

The forms that this transformation took were manifold. While some were clearly, openly expressed or easily interpreted as having affected profound changes in their worldviews, others, at least on their surface, seemed less life-altering. However, an argument should be made that seemingly small changes in thinking on environmental issues, approaches to one's work, and other processes can have a domino effect on both individuals' behavior and their thinking on other issues.

No Transformation. A few people in SPC and WPWA said very bluntly that their work had not transformed them. While not elaborating upon this at length, the individuals who responded this way were all older men, with high levels of education and many years of professional experience. One respondent said he would have been doing this work anyway, regardless of whether it was with this group or not.

Transformation as Acknowledging Complexity. For some, engagement in community stewardship, over time, has led to an understanding that environmental issues, and the dynamics underlying them, are incredibly complicated and not easily resolved even under the best of circumstances.

> I think when you begin you start from the position of passion combined with naivete. And from that naïve and passionate beginning, you see things more in terms of black and white. It becomes an issue of, "They're wrong, we're right, get the PCBs out." And then you start learning about the subject, and you start learning about the ramifications of getting the PCBs out, even assuming that you would have a willing party, assisting you in forcing that kind of action. And, suddenly, the picture becomes a

> lot more complicated. Not suddenly, but gradually. And, so some things you hold onto, and some things you modify. (HRI member, 2001)

Part of this is recognizing that groups, such as government agencies, which one can at times be working against, include representatives who may in fact have the same goals as the organization. The human dynamics of work on these issues are not easily divided into black and white, good and bad.

> Initially, it was a privilege and a thrill and a great opportunity to be a part of what I saw as a very important, grassroots enterprise, making a real difference. Very few people making a huge difference. I have, I have, having been involved long enough, I've now had the opportunity to learn, you know, that everybody's got feet of clay. That the regulators don't always do the right thing, that sometimes even General Electric does the right thing. (HRI member, 2001)

In the end, acknowledging complexity means realizing that not only are there gray areas in terms of positions held by agencies, corporations, and stewardship groups and their representatives. It is also possible that everyone, in the end, is a victim of bad decisions and long-term environmental degradation.

> We had someone come in and give a talk at one point fairly early in this thing. And one of the points that he made that was sort of, has stuck with us all the way through, is that, he said, "Listen, in a situation like this, no one wins. Everyone feels like they've been screwed. The agencies feel that, no matter how hard they try they can't please the public enough. They've got the corporations sort of gunning at them for, you know, all of the changes and cleanup that they're required to do. The companies feel that they've bent over backwards trying to accommodate the agencies and the people and they're spending lots of money trying to do something which they don't necessarily feel is their fault. And, even if it was, it's blowing a hole in their bottom line. And the public always feels they're getting less than they should. And that nobody's really embracing their issues the way they do, and nobody really wants to accomplish the kind of cleanup that the public, or at least the activists have as a vision. So, everybody ends up being screwed." (HRI member, 2001)

Transformation as Disillusionment. Sadly, the responses of many of those interviewed, especially from HRI, leaves little doubt that passionate engagement in the work of a community stewardship group can transform one in ways that leave one feeling thoroughly discouraged about the motives of government agencies, corporations, and even others in one's community.

> My father thought the sun rose and set on the GE, and I kind of felt that way myself too, but after I got out and I started looking how they were, they were rotten. They are rotten. They are really bad.

> We made Cadillacs…distribution, power, and regulators, they were the best. And what's upsetting is, they kept other businesses out of this town, and then they polluted it and left it, and it bothers me. Because I'm first generation. And, whether it's your family or your business, you take care of the people. You take care of your people. Sure, GE's in business to make money. Fine, that's why you're in business. But take care of your own. This was a two way street. We made them, they made us. They really did a number on us, and they're not being very nice about it. I could go on and on. (HRI member, 2001)

Even more discouragingly, this sense of disillusionment may extend not only to the motives of agencies, corporations, and people, but also to the very processes meant to exist as checks and balances so that the work of civil society can continue.

> I was involved with the Citizens' Coordinating Counsel that had a meeting once a month in Pittsfield…. We thought it was going to be a big help but it's actually just a political, as far as I'm concerned, just a political cover up…. It was supposed to keep us abreast of everything General Electric and the EPA were doing on the contaminated property, and we were supposed to have some input in trying to change some things if we could. But, it never, we never could change anything.

> The Consent Decree is so bad, it's ridiculous, it's almost unbelievable, it's so bad. I just couldn't believe that the courts allowed it to go through. They were so eager to give the city

> money and get this thing over with, that they twisted, politically they twisted the arm of the federal judge. He waited a whole year, and then, the day of the hearing, he okayed it immediately. He didn't even wait until the next day.
>
> When you're fighting the city itself and the state and the federal, and one of the biggest companies in the world, it's hard to make someone believe that all of them could be that corrupt. And they are, they really are.
>
> We had a meeting with Senator Kerry, and that was disgusting...He was late, he was arrogant, said GE was a wonderful company. It was horrible. We're lucky one of the fellas didn't punch him. That's how bad it was....And then we had a meeting with Senator Kennedy. Now, Senator Kennedy on the other hand was very, very obliging. He said one of his aides would get on it right away, they were going to talk to the governor. If the state wouldn't kick in some money, the federal government would. That never materialized, only he was a better politician. He made us believe that everything was going to go quick.
>
> It's hard for me to explain when you think, when you have a lot of pride in the country that you live in, and you find out that the politicians are crooked, and the courts are crooked, you lose a lot of faith. If I had one little thing that was positive to say about them, I would say it, but I can't, in ten years, I can't come up with anything that's positive to say about any one of those departments. (HRI member, 2001)

If one comes to believe that government agencies, even fundamental elements of the system of governance are corrupt or ineffectual, one may still be able to live with this, knowing that one tried one's best to make a difference. However, the potential impacts of some issues are so troubling that one can experience a feeling of profound sadness that one was unable to effect change.

> When the settlement came down the sad part in my heart is that they gave in on some very giant concessions to which, which we think General Electric should be held accountable for. One of them is the Hill 78 issue, where they are, you know, leaving a known contaminated dump, highly contaminated dump that's totally documented in EPA records, and what saddens us is that it's

> fifty yards from the elementary school that they cleaned up last summer. (HRI member, 2001)

Sadness, a sense of failing to effect positive change, and disillusionment with the system does not necessarily translate into defeat. If one continues to feel passionate about the issues and has the energy to continue working on them, it is certainly possible to draw on reserves of hope and optimism. However, the possibility of burnout looms large when one is faced with such overwhelming odds and such long-term frustration.

> Kicking at the heels of the giant is something that breeds burnout. We need to do something bigger to rip out the heart of the beast. Because putting out fires every week, little fires here and there, that's what they wait for. They wait for you. They've got the time and they've got the money to wait you out until you fry, or until you become numb. And I'm sure there's a whole psychology at sites like this, of how the communities just don't want to hear it anymore. They just want it to go away for various reasons. (HRI member, 2001)

In other contexts, however, there is also the frustration borne of an understanding that years of work have had very little impact on raising peoples' awareness and changing their behavior on any kind of significant scale.

> It certainly gave me a better appreciation of the struggle that many of these non-profits, you know, on a scale like that of WPWA, have to go through just to exist.... The one thing that it gave me a much better appreciation for is how much effort has to go into attracting the attention and understanding of even so very few people. The effort expended often times for, at least what you can tell, how you've changed a person's awareness, never mind changing behaviors, you know that's a couple of orders of magnitude farther out there, I think, you know, is just phenomenal. It's almost depressing, if you think about it too hard.... Maybe part of it is the way the Association has done things, and maybe part of it is just that people are so anesthetized to some of the problems or don't want to know. (WPWA member, 2001)

Transformation as Moving Beyond Disillusionment. Fortunately, there are those who are able to carry on with the work of stewardship, even after years of frustration, disillusionment, and acknowledgement of a reality they once might never have imagined possible. This dynamic is somewhat analogous to the idea that courage is not an absence of fear, but realizing that there are issues more important than one's fear that need to be addressed.

> It's come to me in the last couple of months that it's a lot like, you know, that sort fable you learn when you're a kid about the emperor and no clothes. What are your alternatives, when you open your eyes and you see the emperor has no clothes, and everybody around you saying, "No, no, no, it's beautiful. Things are fine, it's really terrific." One, you can doubt yourself, and say, okay, this is too much. You can start nagging everybody, saying, "Oh, no, come on, open your eyes, look, look, there's no clothes, you've got to see it!" To the point where people just turn you off. You can go mad, or you can figure out some way to live with the reality that things are not what you thought they were, and how do you find your way in that universe? And, I don't necessarily have the answers, and I do know that it's a real balancing act, and I know that I've learned too much to go back to not knowing. (HRI member, 2001)

Transformation as Personal Growth. Experiencing disillusionment, confronting it, and moving beyond all imply profound stirrings of one's worldview. However, transformation can occur in small steps.

> There have been thousands of little tiny light bulbs, not one giant light bulb. But, I guess my education has been gradual, with little light bulbs. I mean, just seeing how the EPA works, seeing how DEP works, seeing how the two agencies work together, 'cause that's something I'm interested in. And I teach this stuff. So, I'm very interested in seeing how the agencies work, how the decision-making process works. The environmental, the way GE works with their consultants. I mean, it's just, little light bulbs all the time. 'Cause this is really sort of the first issue of this magnitude that I've been involved in. I think we can all say that. (HRI member, 2001)

These small steps can add up to major changes in one's behavior, changes that almost certainly would not have occurred without engaging in the processes of community stewardship.

> I've tended to become a lot more involved with other things, just branching off from this. They have a stadium issue here in town, and [I've] become a little locally involved.... I was always a background person. I was always one of the guys that stood in the back.... Since I've been involved with this, I've had a lot of TV coverage, reporters, interviews, I've had to learn to speak up a little more too. You know, I was always the quiet one. Part of what's brought me out in this is, I've been able to come out and speak more. (HRI member, 2001)

Personal growth also results from learning that would not have occurred if one had not been involved. "I've learned a lot. I feel that I have a much better understanding of the issues. And, I guess, selfishly, that's why I wanted to be a part of it anyway, because I really just didn't have a full grasp of the issues (SPC member, 2001)."

This kind of learning has the potential to give one a sense of empowerment that cannot be underestimated.

> Ownership isn't really the word that I'm looking for. It's more like a stewardship, a kinship with what they're now getting to know and understand. You know, to look out at a forest, you see a bunch of trees. But if you can look out, and you know that those are basically white pine and there's some birch and there's some oak, and so then you get to see it more for the different components of it, you know?... I can talk about the complexity of habitat, and where things can be very sensitive to degradation and stuff like that. So, I can continue to make people aware. And that's nice, to be able to do that, to have this understanding and knowledge in something that I enjoy doing. (WPWA member, 2001)

The personal growth one experiences from learning and engagement not only empowers one with a greater knowledge of one's environment, it also has the

potential to deepen one's understanding of one's place in an ecosystem, which is essential to good stewardship.

> My sense of responsibility is not just a personal one but a larger one to community and beyond that to the natural community. You know, I mean, people say community and they always sort of imply the human community, but I see it as much larger than that. The natural, you know, landscape and its wildlife are to me a community as well. And, I feel it's important to give voice to that community as much as to the human community living in it. So, I've taken that role much more seriously and, you know, done the best I can with that. (WPWA member, 2001)

Finally, personal growth as transformation may be experienced as an awareness of the impact of one's actions continuously pervading one's thinking. Once one becomes aware of these impacts, which frequently are the result of seemingly innocent everyday behaviors, there is no turning back. While one may choose not to change one's behavior, it is impossible to ignore the potential damage one is capable of.

> I was never as acutely aware of the impact of our flushing the toilet, for example. It never dawned on me, because we had moved over here from Connecticut, and our area was sewered. And, it makes a difference when you're in a septic field area. And, not only that, but the bags that turtles can eat and succumb, because they've eaten the bag thinking it's something for them…. And I'm certainly more acutely aware of the ring tops on top of soda cans or beer cans that could be cut up in the seagulls. When we go ashore at Napatree Point, or at any of the sand beaches, we have to watch out for the piping plover nests. Oh sure, I'm much more acutely aware. It's been a fascinating experience…(SPC member, 2001)

Transformation as Sense of Accomplishment. The sense of accomplishment one sometimes achieves through engagement in community stewardship, which acts as a motivator for sustained involvement, also has the

potential to transform individuals. As a transformative dynamic, it is empowering in the sense that it cannot be taken away.

A sense of accomplishment does not go away, even when one is struggling with disillusionment or frustration. "I've been very proud about HRI, and the fact that we did make a difference. We pushed this whole thing from where nothing was being done into one of the biggest settlements in the United States, and one of the biggest cleanups in the United States. And that's been a great source of pride (HRI member, 2001)."

This sense of accomplishment does not necessarily reflect a recognition of specific achievements, but can be as much about process as product. Also, transformation may occur not so much from a sense of individual accomplishment as from group accomplishment.

> I've been amazed. Not amazed, but so pleased, to find so many people who are so conscientious, so willing to give up their time, particularly older people, because they're doing it for their grandchildren, not for themselves. And, they always show up. They're always there. They're always doing what it is that they're supposed to be doing, and I think that that's just, really, really so good. I admire them a great deal. (SPC member, 2001)

CHAPTER 7

PATTERNS/PROCESSES OF COMMUNITY BUILDING AND GROUP DYNAMICS

Patterns of Community Building

Beyond the dynamics of initial and sustained involvement, ongoing learning, and transformation experienced by individuals, the potential stewardship through community-based group efforts has for building or disrupting community is worth exploring. A group's work may inspire a feeling of greater connection with others. It may leave engaged individuals feeling frustrated because their message has not reached many or led to significant, visible behavior change. It may even create an unbridgeable rift among community members. All of these scenarios have the potential to influence one's decision about how and/or whether to continue one's involvement. A summary of the patterns of community building and group dynamics expressed by participants is displayed in Table Three on the following page.

Building Trust/Social Capital/Information Sharing. To some extent, it is inevitable that the work of community-based environmental stewardship groups will require the formation and maintenance of social capital, both among the group's members and among allied individuals and groups. Relationships of trust among group members and with stakeholders beyond the group's formal boundaries are essential to work effectively towards accomplishing goals.

The dynamic of social capital formation may evolve in a number of ways, all of which have the potential to strengthen a group's stewardship and enable it to pursue its goals with re-enforced enthusiasm and commitment. The story of

HRI's advocacy on behalf of and with the people of the Lakewood district of Pittsfield is an example of people from very different communities coming

Patterns of Community Building	**H**	**S**	**W**	**Total**
Building Trust/Social Capital	9	9	6	24
Social Apathy	2	4	3	9
Social Discord	5			5
None			1	1
Group Dynamics	**H**	**S**	**W**	**Total**
Growing Pains/Lack of Common Vision		1		1
Internal Disagreement	3	2	1	6
Limits of Time	1	2	2	5

Table 4: Summary of Patterns of Community Building and Group Dynamics

together to address an issue of common concern.

> We got a call from…some of the Lakewood folks, and they asked if I would organize a meeting in Lakewood, and come to Lakewood because, mainly because they knew that we knew about PCBs. And they wanted to ask questions. And so we put together a flyer, let the community know, and we got this little tiny room in the basement of the Italian American Club, expecting like fifteen people, and probably about eighty or ninety people showed up. And we had a real strong discussion about the fact that, you know, a lot of people believed that the fill was all around the community. People were upset just in general with the pollution around the area, and something needed to be done. And out of that meeting, we started having more and more and more Lakewood meetings. (HRI member, 2001)

The value of this collaboration and community building between residents of a Pittsfield neighborhood and selected south County communities is recognized by both sides, as is evident first in the testimony of a Lakewood resident.

> HRI started down county, but if it wasn't for HRI…Lakewood got dumped on a lot, because Lakewood is a section in town, every other house worked in the GE, and we really got hit bad. HRI was good to us people in Lakewood. If it wasn't for them we wouldn't

> have got the cleanup that we got. Like I said, I've got to give a lot of credit to HRI. (HRI member, 2001)

Over time, this community building between original HRI members and Lakewood residents has formed a seamless whole. The mutual interest all have in addressing the cleanup of the river extends across boundaries of professional background and personal interests.

> We've crafted a very unusual coalition. I think it's rare for environmental groups to link up with industrial workers, small business people, even rarer for environmental groups to forge a working coalition with active hunters and sportsmen. And, you know, some of the men and women who fish and hunt ducks have become very involved in trying to clean up the river and make GE accountable. So, that fosters an extended sense of community. (HRI member, 2001)

It is also important to note that both the current President and the current Vice President of HRI's board are Lakewood residents.

Despite the fact that community-based environmental groups, as active participants in the civil society, are sometimes, if not frequently, at odds with local, state and federal agencies, they nevertheless recognize the value, even the necessity, of collaboration. This collaboration is likely to benefit the government agencies as much as the stewardship groups.

> I also find that, in having worked with the EPA and the DEP that, in certain circumstances public agencies like that welcome public participation. Because then they don't have to be out there naked, and fight not only the polluters but also an indifferent citizenry, convincing them that something should be done. And, they can then point to the public's desire when they confront the polluters and say "Listen, there's a vocal constituency in this county that is behind us, and desiring this kind of a cleanup, or this kind of an improvement in their environment." And, I think that works very much in their favor on occasion. (HRI member, 2001)

Even if disagreement and contestation are ongoing, they can be tempered with a recognition that those working with government agencies are fellow human beings, and that maintenance of positive working relationships even under the most trying circumstances is preferable to burning one's bridges. "Even some of the state people, you know, I've become friends with that we're butting heads with. I try not to let it get personal. Some of them, a lot of them tend to let it get personal. But I try to keep that in check as much as I can...(HRI member, 2001)."

Opportunities to build bridges between community-based groups and state agencies may arise from a realization that the two may not initially understand each other's language, and through efforts to improve communication between the two.

> Ironically, the state did not understand that we didn't understand that there were, you know, what the process is, what the steps were. And another one of the women (she's not involved anymore) saying, "Oh. I've been doing this so long, I didn't realize you people didn't know what the steps were."
>
> So, it's been a process not only of educating ourselves, but of educating the people we work with, the government agencies and so forth, of saying, you know, "You've got to remember, all of these people are going through this for the first time. The same way you teach a baby in small increments, you have to take us by the hand and teach us." And when mistrust arises, it's usually because the people in charge, meaning the agencies, have not done their job somehow. (HRI member, 2001)

Both vocal, activist approaches to stewardship and quieter, advocacy approaches have the potential to win over state agencies. "I think that the Salt Ponds Coalition has gradually had an influence on legislatures and regulators in the state, and that's possibly because of our low-key attitude. We're well

respected by and recognized by all of the regulatory agencies that I'm aware of (SPC member, 2001)."

Winning over state agencies, however, does not necessarily translate into instant acknowledgement of one's contribution or use of one's findings. "The last couple of years, the state is now looking at our pond results, that we've had for the last ten, fifteen years, and saying, 'Hey, you guys have got something here.' And, they're working with us, rather than against us. But, they were never actively against us, they were just passively ignoring us (SPC member, 2001)."

Building social capital with government, of course, is not only about relationships with state or federal agencies. Depending on a group's goals and objectives, positive working relationships with selected municipal governments may be equally important.

> They continued to move forward and make real significant gains in working closely with municipalities, state agencies, building a lot of trust, and collaboration there.... I think from the standpoint of municipalities, the Association has...in the past, and I think, beginning again, had a good relationship, you know, with municipalities, with providing advice, you know and comment (not that they would always take it). (WPWA member, 2001)

Sometimes, community support comes surreptitiously. "There're a lot of people who support us, even though they're not willing to come forward publicly and stand up and say so. But, we get a lot of feedback all the time from people who say, 'Thank you for doing this. Keep up the good work.' Which is also one of the things that keeps us going. 'Cause if we weren't getting that, I don't think we would (HRI member, 2001)."

A sense that people are coming together as a community around concern for a natural resource base that they wish to preserve and protect may be intangibly felt, traceable only to anecdotal evidence.

> It's just a feeling that I have, I can't document it, but that there's more, well, membership has been growing in the organization. There's more of a sense of awareness of the importance of the Salt Ponds, and the importance of the need to preserve and protect them. In our summer seminars, we get people from, you know, all over southern Rhode Island coming together. And I think that the reputation of the Coalition is such that, it's quite good, and improving, and we get more and more publicity, good publicity, and more and more members follow. (SPC member, 2001)

Limits to Community Building. While the efforts of all three groups to develop positive relationships with government agencies and the wider community are admirable, it must be acknowledged that much remains to be done. From an ecosystem perspective, the scope of all three groups' work covers a substantial geographical area.

While the impacts of land use decisions and human actions on these ecosystems affect thousands of people, the total membership of each group ranges from several hundred (for SPC and WPWA) to approximately two thousand (for HRI, based on their mailing list, not on annual dues). The number of core, active members whose involvement is sustained is considerably lower for each group.

> We have, I think, nine or ten municipalities, all or a major part of which are in the watershed. Seven on Rhode Island's side, and I think it's three on the Connecticut. But then we have a number of other municipalities that have little bits of them, like a few acres, there's a small aerial intersection that falls in the watershed. So there are about a dozen or thirteen...communities in the watershed. Now I don't for a minute think that the Wood Pawcatuck Watershed Association has somehow fostered a sense of community or a sense of identity, that it flows from the existence

> of the Wood Pawcatuck Watershed Association and the Watershed Association's activities. (WPWA member, 2001)

Social Apathy. Acknowledging the limits of the audience a group's work has reached may not be as difficult as acknowledging the widespread apathy prevalent in numerous communities towards a group's efforts. Part of this may be simple lack of interest.

> There are a whole lot of people out there who just simply don't care. We did not, certainly, rally the people of Pittsfield. We couldn't even get them.... We attempted to, but very interesting, we could not, when the Allendale School, when the PCBs were taken out of there, and basically dumped, not very far away, a few hundred yards away.... I don't think we got two or three people to show up even at a meeting to be concerned with that. So the answer is no. We did not increase the outrage of the people of Pittsfield. There were a small group of people who were individually effected, who had PCBs on their property in the Lakeville (sic) area, but the general public, no. They were pretty much immune to the whole thing. (HRI member, 2001)

Yet even among those directly affected by an issue, there may be apathy.

> There's still, particularly among the older people, from among the people who made more money than others from GE being here, there still is a little bit of that, "Leave it alone. It's in the past. Don't worry about it." And especially, 'cause PCBs, you can't see 'em, taste 'em, feel 'em. And the effects are very long term. It's really hard to get some people interested in the issue. That's the real discouraging part. That's the real downside part. And, what's so discouraging to me is that the people who are directly affected, a lot of them just don't want to deal with it. They don't want to think about it, they, you know, the ostrich approach. (HRI member, 2001)

Apathy may also stem from a genuine lack of awareness of a group's efforts or even of the issues that they are trying to address.

> What you encounter is indifference and ignorance.... There're just too many diverse constituencies to reach that it's taking a long time to reach them. One of the projects we had in the last several years was to find new distribution channels for information.

> Because the average person doesn't go to a public meeting on stuff, and when somebody's new in town, they don't have a clue where to go.
>
> And so we try to find, we're trying to work with some realtors now, we're trying to work through tax assessors, we're trying to work through people, just to get basic information out there. Most people that come in to this part of the state have come here for vacations in the past, and they don't know what's in the back yard, and they don't know that there's no sewers, and they don't know any of that kind of stuff. And they come here, and they just assume it's just like it was in downtown Hartford or something. Reaching those people takes a long time, most of them. (SPC member, 2001)

There is yet another dynamic of apathy worthy of mention. This is that the vast majority of people tend not to get involved in community-based environmental stewardship unless there is an issue directly confronting them.

> The public, unless there is a truly galvanizing, high profile, controversial issue, is not going to become actively involved in the day to day issues that are important for resource conservation and environmental management. So, you need a really lightning rod, galvanizing kind of issue to mobilize the public. (WPWA member, 2001)

Coupled with this is a seeming lack of understanding of the need for ongoing involvement as central to effective stewardship. "It's a concept that people don't immediately take to, to be proactive rather than reactive. It's easier to get people excited about problems that could directly affect them. But it's harder to get them excited about the lack of problems, or to watch out for problems (WPWA member, 2001)."

Social Discord. In the case of HRI, a great deal of tension and disagreement over how to proceed, over what precisely is the central issue of concern, and over who should be held responsible for a cleanup of the river, has

arisen over the years. This is likely due in part to the unique and challenging context within which their work has transpired, but it has left an indelible mark on the region.

> It has caused arguments between husbands and wives. It has caused, almost, fights between neighbor and neighbor. It's caused a lot of dissension. There's people that would say, "I've worked in this stuff for years and I'm perfectly healthy, look at me." There's people that think that this is a waste of time, there's nothing wrong with it. Husband and wife have disagreed on the cleanup of this, of PCBs. No, it hasn't been that nice. (HRI member, 2001)

In addition to the social division wrought within families and neighborhoods, a great deal of unresolved tension, even resentment, exists among HRI members, some Lakewood residents, and local, state, and federal government representatives.

> Not one politician, nor not one representative of a politician, local, state, federal, bothered to show up, to hear, see, information that the members, that we had gathered, I had gathered, for the health symposium, came to present, many of who are distinguished internationally recognized experts in the field. And to be that obviously, visibly blind or disinterested in real information was a, I consider it be a terrible disservice to their public, and to the constituents that the politicians represented, a terrible disservice to the city of Pittsfield in terms of its people's general and long-term health. And, evidence of how deep the fear and collusion really runs in this community. (HRI member, 2001)

Some HRI members have had to endure personal attacks resulting from their unwavering stance on issues. "I had people call me, and not threaten me, but they didn't like what I was doing. They said I was running Pittsfield down with all of this talk about health hazards. So, they didn't want to really get into it. Even the city didn't want to get into it. They didn't want to dig up anything. They just wanted to let it go away. They still do (HRI member, 2001)."

Personal attacks take many forms, and they can be as much about attacking the organization and it's work as the individual. "They call us names in the newspaper, there's some people who think we're nuts, or think we're just trying to stir up trouble for the sake of trouble (HRI member, 2001)."

Yet, for HRI members, perhaps the most difficult element of community division emerging from their advocacy is the perception expressed by those in opposition to their stewardship that they are engaged in their work for selfish reasons. Worse is the perception that their strategies and goals are counter to the best interests of the community.

> It's the commitment and passion that people bring to a grassroots organization that creates the great sense of frustration and disappointment when a segment of a community, or the majority of a community turns a blind eye towards its activities. Or worse yet, tries to disparage them, or take them as being, not working for the good of the community. And, one of the things that, you know, I always say is, that if you look at the positions that are staked out in a situation like this, and then ask yourself the question, "Why are these positions being staked out?" I mean, what are the various individuals gaining from the positions that they're staking out? You always come back to the awareness that the people in an organization like the HRI have absolutely no personal gain in their activities. I mean, there's, they are as, they're completely untainted with economic motives. (HRI member, 2001)

Group Dynamics

Again, within each community-based environmental stewardship group, a range of individuals are active. People from various educational and professional backgrounds and levels of attainment, people in their twenties to people in their seventies are engaged in the work of these groups. Motives for their involvement are also quite diverse, as are strategic preferences and long-term visions for the groups.

Yet it is important for individuals to find common ground, in order to collectively represent the stated interests of the group. While creative tension is inevitable with such diversity present, it is a tribute to the determination of these groups that they are able to work within this dynamic and achieve a great deal.

An examination of the various patterns of group dynamics present has the potential to help us better understand the conditions the individual steward works under as an active group member. Far from implying that the group dynamics that will be explored discourage or inhibit ongoing individual involvement, the opposite may in fact be the case. It is possible that the very fluidity existing within groups acts as a source of inspiration, or at the very least stimulation, for individuals to continue their work with the group.

Growing Pains/Lack of Commonly Understood Mission, Vision. Each of the groups explored in this study, while still quite small, has achieved remarkable growth over the years. None of the groups is even twenty years old, and the geographic focus of their work is relatively small compared to national groups. Yet they have continued to expand their membership, sustained or increased

levels of funding, and incrementally broadened the audience receptive and listening to their message.

This has not happened without facing some challenges along the way. Sometimes, this is manifested as a feeling that not everyone is on the same page about future direction, and that this may be having an impact on the group's ability to expand its audience. This does not necessarily imply disagreement among group members. It is more emblematic of a feeling that not everyone understands the organization's mission and goals the same way; that significant differences of interpretation may exist, without group members even being aware of it.

> The Salt Ponds Coalition organization itself needs to understand better what it is that we're about. It needs to understand what our positions are. We need to articulate them. We need to tell people why they should be joining us, and what it is that we've done. And, what do we stand for. And, I don't think that we've done a very good job of that.
>
> I mean, it's an organization that's grown, you know, from a real small group. And, it's gone through typical growing pains. We need some more organization, and we need to be able to tell folks, you know, 'This is why, this is why you ought to support us. And here are the things that we've done.' (SPC member, 2001)

Internal Disagreement. While confusion over or lack of a common mission may be a symptom of growing pains, there is likely to be creative tension, even disagreement, about strategic focus and priorities for action in any community-based group with a diverse yet passionate membership. In the case of HRI, board members were almost evenly split on the most critical decision the group has made to date, on whether or not to accept the Consent Decree.

> We therefore had to decide as a board whether or not we were going to accept that explanation by the EPA or if we were going to fight, basically in court for a review of the Consent Decree. So, there were, I don't think we spoke to each other, I don't think the board met for about six months afterwards, 'cause it was such a hard decision to make. And those who agreed to the vote, I think it was like 9-7 to withdraw our objections to the Consent Decree. So, it was a very close vote. (HRI member, 2001)

The context of HRI's work, and the nature of the issues they have tried to address, has resulted in a selection of activist strategies which has served them well and, it may well be argued, was necessary to accomplish what they have accomplished. Yet, because the Consent Decree was a major turning point in their work, regardless of the degree to which some members felt that it did not achieve their objectives, there is no longer total agreement on how to proceed in the future. "That no holds barred, I don't care how rude I have to be, I'm still going to get my point across, pitbull advocate position is nothing more or less than a tool. And there's a time and a place for it, and there isn't (HRI member, 2001)."

Alternatively, there may not be total agreement that a quiet, non-confrontational approach to advocacy is always the best way to proceed.

> We had an oil spill at Moonstone, a number of years ago. I was out of state, but we had volunteers that were handy, that did help with monitoring the ponds, was the oil coming in? etc. But we never took really a, we never put public notices out about the effect on the ponds, the outrage that this could happen. We never, we got zero publicity from that, except from the regulatory agencies that recognized us as helpful entities. (SPC member, 2001)

Because community-based environmental groups have such limited funding and manpower capacity, they must choose their projects carefully. As a result, some disagreement may arise over specific project focus.

> Hopefully [I'm there] as a constructive critic rather than a nothing, trying to keep them focused on what they should be doing.... I guess I'm one of the old hat guys. I'd like to see it stay more concentrated strictly on the salt ponds. By that I mean their health, environment, what goes on, people's use, so on and so forth. Right now it's got some offshoots...[where] I cannot see a connection. (SPC member, 2001)

Beyond strategic approaches and selection of projects, there may also exist disagreement over the *effectiveness* of specific projects.

> I think it's a good idea [water quality monitoring], and I think it's lovely that there are people who are volunteering to do this service. On the other hand, I think that what they're doing may not be the most efficient way to gather good information about what's happening.... I don't think they have clearly defined what they want to monitor. Effectively, what they want, how specific they want to be about detecting changes, or changes with time or space, and how many samples they should be taking in order to be able to objectively define these objectives, etc.... The idea is a good one, but I don't think that it has been as carefully as possible planned and designed.

> The efforts that have been made have not been...examined from the point of view of will they essentially accomplish the objectives that might have been set. You know, you could call, you could say, "We're doing monitoring," but if you don't define what you're monitoring, how you're monitoring, and what you want to find, it's very difficult to know whether you're going to reach your goal or not.... The work is good but there's much more that could be done. And obviously, getting more done is going to mean more

> work, more money, and more scientific direction. And I'm not sure that that's the way the Watershed Board of Directors want to go...(WPWA member, 2001)

Creative tension and internal disagreement over how to proceed can certainly be a healthy dynamic in an organization, allowing people to express their opinions, share their views, and work together towards consensus. Yet there also exists the possibility that disagreement could be so strongly felt that it leads to permanent rifts, even the formation of parallel groups seeking to reach the same goals through very different strategies.

> Like a lot of these groups, we actually started out a lot larger at one point. Unfortunately, there was another group of people who had a different philosophy in how to approach things, and they split off from us. We have [made efforts to reconcile], and it just has not worked out, because these other people insist on being THE leaders in charge, making all the decisions, telling us what to do. (HRI member, 2001)

Limits of Time/Commitment. An ongoing, virtually inevitable challenge faced by community-based stewardship groups is the limits of time that members have to devote to the group's work. The professional staff time each group can afford ranges from one day per week (HRI's Executive Director) to half-time (SPC's Executive Director) to one and a half paid staff (WPWA's Executive and Program Directors, respectively).

This becomes a particularly daunting reality if a group is actively opposed to the actions of another group, such as a private corporation or a government agency perceived as working against their interests.

> Is there more we could do? Probably, we have talked about it. But, there's also the issue of the rest of us. We only have so much money, we only have so much free time, and everybody on the other side of the issue (and in that, I include the agencies too,

> because sometimes they've felt like they're more against us than with us), they're all doing it as a job. They're all getting paid to do it. They're all, they have so much time automatically dedicated to it. They don't have to fit it in between soccer games and lessons and birthday parties and things like that. (HRI member, 2001)

In the absence of flexible schedules, which many who work full time do not have, there is a likelihood that a large number of active volunteers will be drawn from senior citizens in the community. "You're really looking at the retired community or the retired community. You know, I can't think of anybody our age that has that much free time during the day (WPWA member, 2001)."

While it is in one sense unfortunate that a greater range of individuals are not always available to engage in stewardship work, the contribution made by active senior citizens should not be undervalued or underestimated.

> What is so incredibly important is for the youth to know, and to get involved.... But...when it's time to, when your time is, do you want to spend it at the Salt Ponds Coalition, or go to a Cub Scout meeting or a Boy Scout meeting, there's something inside that says the Cub Scouts, it's the time. And, as you go through this, various phases of life, this is what you find. But, now these folks that are in the Salt Ponds Coalition have finally got to that point, that they don't have to worry about making a buck. The kids are educated, and now they can look at some loftier inner directions. And that's what makes it work. (SPC member, 2001)

CHAPTER 8

CONCLUSIONS: IMPLICATIONS FOR STEWARDSHIP EDUCATION AND SUGGESTIONS FOR FURTHER RESEARCH

Introduction

This study has sought to explore the nature of sustained involvement and ongoing learning of individuals engaged in the efforts of community-based environmental stewardship groups. The research has combined an examination of three community-based environmental stewardship groups located in southern New England, through review of a number of primary source materials, with short, tightly structured interviews and longer, less structured interviews with a range of individuals engaged in this work.

By choosing to focus on a limited number of specific dynamics, the study has sought to shed light on this phenomenon. In particular, the research has identified a number of emergent patterns, named and analyzed as categories under the dynamics of initial involvement, sustained involvement, ongoing learning, and transformation. Further, patterns of community building and group dynamics have been named and analyzed.

From the initial formulation of the research design to the date of this writing, a fundamental contention guiding the effort has been that education is a critical component of the work of community-based environmental stewardship groups. Education is necessary not only to raise awareness of the general public about the issues a group is addressing, but can serve a number of additional purposes.

First, education has the potential to intrigue community members about the possibilities for personal fulfillment through involvement in a group's work. Second, it can be used to stimulate active members, recharging their energy levels and inspiring them to renew their commitment to the group's work. Third, it can be used strategically. Simply put, there may be times when even the most engaged stewards are not up to speed on a particular issue and need to learn about it. Complementing this is the need for occasional upgrading of skills. All of this implies that the need for education is ongoing.

Yet the forms it may conceivably take are extremely diverse. Far from seeing this as a hindrance to effectively achieving a group's educational goals, stewardship educators should view this as an opportunity. The findings of this research offer a number of considerations and potential paths for stewardship educators to take as they seek innovative approaches to curriculum design and program development.

Implications of Findings for Stewardship Education

In formulating the research design for this study, four dynamics of individual involvement were chosen for exploration, along with two social dynamics. These dynamics, while analyzed separately in the previous chapters, were not explored separately during the research phase. Questions addressing each were asked during the same interview. Occasionally, answers overlapped. It is also arguable that previously given answers to questions regarding involvement may have informed answers to questions regarding ongoing learning and/or transformation.

Because of the researcher's interest in all of these dynamics, and because of the likely interaction between them, it is only logical that the implications for education suggested by findings have emerged from a consideration of *all* of the data and its analysis. Hence, the implications outlined and elaborated upon below *combine*, to a greater or lesser degree, insights from the findings discussed as categories, or patterns/processes, under the different dynamics, as opposed to mirroring, in isolation, the findings from any specific category.

Opportunities for Engagement Are Manifold. Under the dynamics of initial and sustained involvement, ten distinct categories for both were named by participants in this study. Even after collapsing categories with similar if not identical meanings, a total of fifteen distinct categories remained. It is unclear to what extent any or all of these categories would be repeated in different contexts and by different individuals. Nevertheless, they offer stewardship educators a variety of considerations when designing and marketing educational efforts. One can easily envision a brochure listing a number of these categories as potential benefits of involvement.

At least two of these categories could hardly be seen as incentives that stewardship educators would wish to encourage (anger and self-interest). Nevertheless, these educators should be aware of the potential that these are the primary initial motivations for some, and make conscientious efforts to channel these individuals' motivations in alternate directions in the event that this is the case.

Stewardship Educators Should Be Aware of the Group's Role in Civil Society. The evidence presented in this paper, from both the primary source materials and participant interviews, makes a convincing case that the work of these groups is perceived to make a critical difference. By addressing environmental issues of concern to their community in ways that government agencies are either unable or unwilling to, they have the potential to make a crucial difference that can be measured in terms of real outcomes.

It is an open question to what extent the majority of the general public in any community understands the importance and contributions of the civil society. Yet it is significant that the largest number of overall responses describing the reasons for sustained involvement fell in this category. Environmental stewards recognize that they are essentially filling a void through their involvement, either by questioning and/or contesting the actions of government, or by providing additional resources to government.

Because this pattern of response was so prevalent, it is noteworthy for stewardship educators, especially when viewed in light of the number of participants lamenting the level of social apathy extant in the wider community. Beyond busy lives and lack of awareness of the issues, part of the reason for such apathy among community members may be a misguided assumption, left unquestioned, that any existing environmental problems are being taken care of by appropriate government agencies. It therefore becomes all the more important to consistently remind community members of the critical role of civil society.

This is very much in keeping with Lindeman's adult education goal of "making the collective life an education experience (Lindeman, as quoted in Brookfield, 1987, p. 17)." Additionally, it underscores Welton's point that part of "the core value structure of socially responsible adult education…[includes]…the centrality of social learning processes to the formation of the active citizen. And 'civil society' – the realm of communicative action and self-organization, is the key to understanding the meaning of deliberative democracy (Welton, 1997, p. 28)."

Stewardship Education is Best Approached through Nonformal Processes. One of the most striking findings to come out of this research is that, while learning takes many forms and plays an important role in sustaining and improving stewards' effectiveness in working towards their goals, such learning is rarely achieved through formal course offerings or training opportunities.

While it must be continually stressed that these findings can not be generalized to a wider audience, and while a group's formal educational offerings have undeniable benefits and likely may reach important target audiences, the stewardship educator should remain vigilant and flexible about facilitating other, less formal opportunities for learning.

Central among these would be an ongoing, conscious effort by the stewardship educator to encourage group members to engage in ongoing learning through strategic use of the world wide web and other easily accessible, affordable resources. This is, of course, about more than merely pointing people in the direction of the nearest library or providing a list of useful web sites. In the

best traditions of adult education, it is also about promoting a mindset that cherishes and seeks out opportunities for ongoing, self-directed learning. The stewardship educator should be prepared to facilitate and structure such opportunities.

Complementing this would be the creation of a network of supportive, allied experts. By maintaining and encouraging the use of such a network, the stewardship educator would be making an important contribution to the ongoing learning of group members. As with efforts to promote self-directed learning, the existence of such a network has the potential to build on itself, creating increasingly effective, knowledgeable stewards and a greater sense of community through greater communication and continuous collaboration.

Such an approach to engaging community members in community-based environmental stewardship is very much in keeping with Jackson's comments. "We have to take seriously evidence that people who do not take up formal...courses because they lack confidence or motivation, can begin learning through other kinds of activities and then move on to formal learning. These are activities they undertake as people, as citizens, as members of civil society (Jackson, 1997, p. 54)."

Stewardship Education Efforts Should Be Experience-Based. While the reasons that people give for their involvement are diverse, so too are the kinds of opportunities to contribute to the work of community-based groups. Each of these groups has numerous activities that they undertake in order to work towards their goals, requiring a variety of skills. From envelope stuffing to grant writing

to newsletter editing to scientific testing to political lobbying, the needs are great. Add to this the potential each group must constantly address to expand the scope of its work, change the direction of its work, engage in temporary, shifting initiatives, and/or collaborate with other groups, and the range of options grows.

Considering the number of individuals who cited a sense of accomplishment as a motive for sustained involvement, not to mention as a potential force for transformation, it behooves the stewardship educator to seek creative ways to combine opportunities for productive work leading to measurable outcomes with learning. Knowing that one is contributing to the work of the group, that this contribution is making a difference in the stewardship of a resource base, and that one is learning in the process, presents an intriguing combination. Such a practice is also supported by adult education theory, specifically the experiential learning cycle first proposed by Kolb and expanded upon by Rogers (Rogers, 1996, p. 111, as adapted from Kolb, 1976, and Honey and Mumford, 1986).

Stewardship educators should be aware of community and group dynamics. Social capital, like civil society, is a concept that is not readily used outside of academia. Yet it is a critically important framework for understanding existing levels of community support for a group's effort, seeking to build and sustain increased levels of support, and effectively using education as a tool for achieving the group's stewardship goals.

Because education is never more than a tool, albeit a critically important one, the stewardship educator should not see his/her role in isolation from a

group's larger goals. Central to this is an understanding of the way the group is currently perceived in its community, as well as a conscientious, ongoing effort to strengthen ties with others. Such efforts must inform and be informed by the group's educational programming in all of its varied formats.

Additionally, group dynamics must be continuously examined. Growing pains being experienced by a group, disagreements over strategic focus or specific tactics, and limited time of group members to engage in learning opportunities or other group activities, must all be weighed in planning educational programming, especially when targeting currently active members.

Transformation is Possible. The importance of transformation cannot be underestimated.

> [Meaning perspective transformation is] the process of becoming critically aware of how and why our presuppositions have come to constrain the way we perceive, understand, and feel about our world; of reformulating these assumptions to permit a more inclusive, discriminating, permeable, and integrative perspective; and of making decisions or otherwise acting on these new understandings. *More inclusive, discriminating, permeable,* and *integrative perspectives are superior perspectives* that adults choose if they can because they are motivated to better understand the meaning of their experience. (Mezirow, as quoted in Merriam and Caffarella, 1999, p. 320).

The findings from this research clearly indicate that individual meaning perspective transformation is a potential outcome of involvement in stewardship. It is not certain, and it takes many forms, including some that could be perceived as negative. Understanding this potential allows stewardship educators to anticipate diverse reactions of learners to specific situations and to be better prepared to channel those reactions in positive ways.

Understanding the potential for disillusionment, for example, empowers educators to design learning opportunities that encourage learners to move beyond disillusionment, embracing their own agency regardless of the daunting nature of any challenges they face. Alternatively, an awareness that stewardship processes frequently play themselves out in small, incremental gains over long periods of time allows the stewardship educator to foster an awareness of this pattern among engaged individuals. This in turn may offer them greater cause for optimism that their contributions, although perhaps not visibly, are making a difference.

Suggestions for Further Research

Review of Glazer and Glazer's Findings. Of the sources discussed in the literature review, perhaps the most direct precursor to the line of inquiry pursued in this study were the findings of Glazer and Glazer's *The environmental crusaders*. Interviewing over 140 people from three countries and, within the U.S., from a diversity of locations, they sought to discern patterns/processes of individual empowerment to engage in environmental activism.

The five patterns/processes they identified included 1) the ability to draw from reserves of social capital in one's community, 2) a belief in the efficacy of grassroots organizing and action, 3) a willingness to learn whatever is necessary to articulate one's case, 4) overcoming fear, and 5) concern for future generations (Glazer and Glazer, 1998, pp. 168-182).

Their research design and focus differed from the present research in a number of significant ways. First, their sample was much larger. Second, it was drawn from a wider array of both geographic and program focus areas. Third, it

did not consistently seek to interview groups of individuals all working with the same organization.

Fourth, those interviewed tended to characterize themselves more directly as activists than those in this study, and their original spurs to action were more consistently a direct response to concerns over human health resulting from corporate pollution and/or misguided state policy. It is important to reiterate that members of HRI, while sharing some common dynamics of this activist profile, identified themselves first and foremost as river advocates. As an organization, HRI's ultimate goal is a swimmable, fishable Housatonic River.

Bearing all of this in mind, it is nevertheless interesting that four of these patterns/processes emerged in one way or another from the present study. First, pre-existing social capital was a factor in some individuals' decision to get involved initially, and in others' decision to stay involved. In essence, some said they got involved because they had friends who were already active and they were encouraged by them, others said that admiration and respect for the people that they worked with in the group acted as a spur for their continued involvement.

Further, it was recognized as a necessary tool in working towards a group's goals. While many detailed the problems that they had had with government agencies over the years, all acknowledged the desire, if not the need, to continuously strengthen their relationships with these agencies, albeit without conceding their stances on issues. Beyond this, all acknowledged the need to continuously improve their relationships with the wider community and the benefits such improvements might lead to.

Second, while not expressed as such, a belief in the efficacy of grass roots advocacy may certainly be seen in the "sense of accomplishment" category cited by a number of stewards both as a motive for sustained involvement and as a pattern of transformation. Many interviewed believed that they had made a difference, and that difference was due not only to their individual efforts, but to those of the group as well.

Third, the number of respondents citing the need for some form of self-directed learning and/or reliance on the support of allied experts for continued learning to effectively articulate a group's case offers additional evidence of the legitimacy of this pattern/process.

Fourth, a concern for future generations was expressed to some extent as both an initial motivator and a motivator for sustained involvement by a number of people in this study.

Of the five categories identified by Glazer and Glazer, only "overcoming fear" was not mentioned by anyone as an important contributor to their decision to become or stay involved. Several reasons for this are possible. First, it was not directly asked or incorporated into any of the instrument's questions. Second, it is possible that people chose not to identify themselves as fearful in reflecting upon the processes they have experienced due to the negative stigma attached to this word. Third, it is likely, with the possible exception of HRI, that any social pressures resulting from one's engagement with the groups discussed in this study was not an overwhelming consideration due to the relatively uncontroversial nature of their advocacy. In the case of HRI, while some negative publicity and a

significant amount of social discord have resulted from their efforts, members have always benefited by the same token from a substantial amount of community support. Further, at least from the data reviewed for this paper, none of HRI's stewards has ever experienced a life-threatening incident or situation in response to their work.

Alternate/Expanded Categories for Research. Because of the critical importance, if not urgency, of the work in which community-based environmental stewards are engaged, it is my contention that this line of research should continue. Additional stewardship groups, from various regions of the U.S. and representing a range of constituencies, addressing an assortment of environmental issues, and with a diversity of program focus areas, should be sought, and the knowledge accumulated by individual members through years of experience should be tapped and examined.

It is difficult to imagine a situation in which conditions could be controlled from group to group or even in selecting individual participants from within specific groups in order to perform statistical analysis of data. Community-based environmental stewardship groups tend to be quite small, and the core number of continuously active members is therefore quite small.

Also, each group truly is different, if not in terms of its specific focus (i.e., there may be many watershed groups throughout the Northeast), than certainly in terms of the geography, demographics, and/or sociopolitical and economic landscape within which the group is working.

Finally, within each group, there is a remarkable diversity of membership, representing various levels of educational attainment, professional backgrounds, age groups, and life experience. This degree of diversity increases the level of unpredictability regarding their reasons for getting and staying involved, the ways in which they learn, and the potential that they will be transformed by this work.

Nevertheless, it is remarkable that, despite this diversity, similar patterns explaining all of these dynamics do emerge. Further, the array of categories coming out of this research has expanded the potential explanations offered by Glazer and Glazer. Their line of inquiry sought to unpack the conditions leading to individual empowerment to take action. Nevertheless, it may be argued that the patterns discerned herein have also created the conditions for empowerment in the ways that have influenced initial and ongoing action.

The extent to which these patterns repeat themselves or are substituted by alternative patterns has the potential to further inform both curriculum design and program development decisions for stewardship education. For example, to the extent that self-directed learning and support of allied experts continue to be mentioned as the most effective ways that people learn, these patterns must be taken into consideration by stewardship educators. These educators can play an important role in the ongoing learning of environmental stewards by guiding and supporting self-directed learning and by acting as a liaison to allied experts. By the same token, to the degree that limited time and an unwillingness to pursue formal learning opportunities is repeated, the implications of these findings cannot be ignored.

Finally, it is easy to envision a number of other research projects seeking similar knowledge about stewardship from different perspectives. What would a group of government agency representatives from agencies with environmental oversight responsibilities, perhaps accustomed to either collaborating with or butting heads with community-based environmental stewardship groups, have to suggest about the effectiveness of these groups, their impact, and how they could improve their advocacy? How would a group of university researchers, perhaps involved in community-based research, answer similar questions? What would representatives of small businesses and/or major corporations, with strong reputations for environment-friendly practices, have to contribute to building a knowledge base of necessary dynamics for effective stewardship.

Program Research. The emphasis of this research has been on the way that individuals learn, the role that learning plays in their advocacy, and the potential for transformation through their involvement. However, from presenting a profile of the three groups in which the thirty participants engage as stewards, it becomes clear that each group sees education as vitally important to their mission.

HRI, SPC, and WPWA all have offered opportunities for education, through formal, nonformal, and informal channels. Some of these have taken the format of consistently offered programs, such as SPC's summer seminar series and WPWA's watershed education teacher training. Some have taken the form of less frequently and/or consistently programmed efforts, such as HRI's PCB education seminars for Lakewood residents and/or WPWA's canoe and hiking

trips for targeted audiences and the general public. Some have been infrequent, ad hoc efforts, such as HRI's visits to schools or WPWA's work with high school students.

Each of these approaches to education serves a useful purpose and is appropriate for selected contexts. To the extent that they foster in a wider swath of the general public a desire to get involved and take action on behalf of their ecosystem, they certainly may be judged to be successful and effective.

It is precisely this level of program effectiveness that should also be a target for further research. From an analysis of alternative program designs, through an exploration of specific program features, number of individuals reached, and increases in membership/involvement potentially traceable to these programs, much could be learned.

Stewardship educators must not dismiss the evidence that individuals seeking to contribute have neither the time nor the desire to consistently take advantage of formal educational offerings. The degree to which innovative programs offer viable alternatives, with proven success in both attracting individuals and fostering ongoing learning, is a topic worthy of further exploration and explication.

Finally, research on the effectiveness of pilot efforts would be a worthy undertaking. It may be that the most effective way to reach an increasing number of individuals may not yet have been discovered. Further, it is certainly possible that successful innovative efforts in one context may not be transferable to other

contexts, requiring creative thinking to design a program that works. Exploring such a process may again offer many insights to stewardship educators.

Closing Comments

The importance of stewardship education cannot be underestimated. Much of human suffering and oppression may be traceable to unjust political and economic systems. These underlying conditions and the resultant poverty and inequity need to be addressed by educators and advocates of social justice everywhere.

At the same time, it is equally impossible for those concerned with human development and the future of the planet to ignore the steady degradation of the earth's environment, especially over the last thirty years or so. As the world's population continues to grow, resources are increasingly consumed in unsustainable ways, habitats are permanently degraded or destroyed, and species become extinct in alarming ways.

> If today is a typical day on planet earth, we will lose 116 square miles of rain forest, or about an acre a second. We will lose another 72 square miles to encroaching deserts, the results of human mismanagement and overpopulation. We will lose 40 to 250 species, and no one knows whether the number is 40 or 250. Today the human population will increase by 250,000. And today we will add 2,700 tons of chlorofluorocarbons and 15 million tons of carbon dioxide to the atmosphere.... By year's end, the numbers are staggering: The total loss of rain forest will equal an area the size of the state of Washington; expanding deserts will equal an area the size of the state of West Virginia; and the global population will have risen by more than 90,000,000. (Orr, 1994, p. 7)

If it is true that social change begins with each individual, and with the contribution that each of us can make in our own communities, than stewardship education has a critical role to play. Curricula and programs need to be designed

as flexibly as possible, open to ongoing change and adaptation, to meet the needs and address the constraints of those already involved, and to encourage others to become involved and not be intimidated by the prospect of ongoing learning. Further, curricula and programs should be designed to encourage participants to seek out opportunities for self-directed and supported learning, unfettered by traditional limits of scheduling, location, and prerequisites.

It is equally likely that, to the extent that a sense of stewardship, of a deep love of place and feeling of responsibility for that place, is absent from a region, there will be significantly less of a sense of community in that place. Certainly, the degree to which a region's people can come together around a commonly felt bond of stewardship increases the chances for social capital formation and commonality of purpose.

> A culture is not a collection of relics and ornaments, but a practical necessity, and its corruption invokes calamity. A healthy culture is a communal order of memory, insight, value, work, conviviality, reverence, aspiration. It reveals the human necessities and the human limits. It clarifies our inescapable bond to the earth and to each other. It assures that the necessary restraints are observed, that the necessary work is done, and that it is done well. (Berry, 1986, p. 43)

In closing, the stories shared by the thirty environmental stewards interviewed for this paper have much to teach us about the potential for human agency. Individuals, concerned about the ecosystem health of their home place and desiring to contribute to ameliorating current problems and/or preventing anticipated problems, can make a huge difference.

Along the way, there is much opportunity for learning in ways that will directly inform their work. This process of learning to inform action, reflecting

on experience, and allowing experience to contribute to decisions on further learning and action, is a direct manifestation of the experiential learning cycle and praxis. Such ongoing praxis has the potential to lead to meaning perspective transformation.

Yet in the end, stewardship, it should be argued, is not merely about personal fulfillment through active engagement, ongoing learning, and/or transformation. Nor is it only about preserving a resource base, a habitat, an ecosystem and assuring that human activity and economic use of the resource base is done sustainably, although this is a lofty, inescapably necessary goal. What it really comes down to, as is the goal of all efforts at human development, is a desire to make the world a better place, in our time and for future generations.

> With the limited resources that we have in the world, and if we have a conscience about what is going to be there for my beautiful grandchildren and your children, you know, it's something that we should be thinking about. And essentially, I'm thinking about the children to come, and what they're going to have. And that's what motivates me. Children are beautiful. (SPC member, 2001)

APPENDIX A

INTERVIEW PROTOCOL: STEWARDSHIP AND ONGOING LEARNING

Instructions: The following questionnaire should take no longer than 30 minutes to administer. While remaining flexible about length of response time allowed per question, the interviewer should nevertheless be mindful of moving the interview along.

Flexibility should also be applied to the wording of questions and to the inclusion of probing or follow-up questions. A rigid approach to posing questions may be counterproductive. Each interview participant will be different; hence, the interview process should allow for limited spontaneity.

Questions

1) Please briefly describe your educational and professional background.

2) Please describe the guiding philosophy of the organization.

3) Please describe recent and current, ongoing initiatives in which you are directly involved.

4a) Personally, what motivated you to get involved?

4b) What sustains your involvement?

5) Has the organization's work fostered a stronger sense of community locally?

6) Have there been any barriers (institutionally or from other community members) that you personally and/or the organization have had to confront in pursuing your/their goals?

7a) Are there any personal learning needs that have arisen in working with the organization? If so, how have you addressed them?

7b) What kinds of educational opportunities has the organization offered its members and/or members of the larger community? Future plans?

7c) Are there any gaps in available learning opportunities relevant to stewardship and the work of the organization?

8) Has your experience with the organization transformed you or changed your perspective?

APPENDIX B

CONSENT FOR VOLUNTARY PARTICIPATION

Environmental Stewardship as a Transformative Practice: An Inquiry into the Nature of Sustained Involvement and Ongoing Learning

I volunteer to participate in this qualitative study and understand that:

1. I will be interviewed by Mark DeMoranville using a guided interview format consisting of eleven questions.

2. The questions I will be answering address my experiences as a volunteer or employee of [organization]. I understand that the primary purpose of this research is to inquire into the nature of sustained involvement and ongoing learning of community members involved in environmental management, or stewardship, initiatives.

3. The interview will be tape recorded to facilitate analysis of data.

4. My name will note be used, nor will I be identified personally in any way or at any time, unless I give expressed written permission for the researcher to do so. I understand that it will be necessary to identify participants in the dissertation by organizational affiliation and to occasionally distinguish between responses of the organization's employees and responses of the organization's volunteers.

5. I may withdraw from part or all of this study at any time.

6. I have the right to review material prior to the final oral exam or other publication.

7. I understand that results from this interview will be included in Mark DeMoranville's doctoral dissertation and also may be included in manuscripts submitted to professional journals for publication.

8. I am free to participate or not participate without prejudice.

9. Because of the small number of participants (thirty, or ten per organization), I understand that there is some risk that I may be identified as a participant in this study.

_____ _____ _____ _____

Researcher's Signature Date Participant's Signature Date

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